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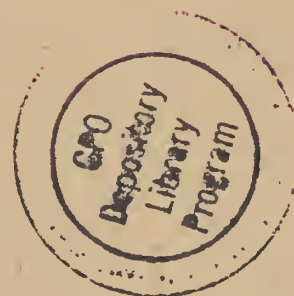
REA Bulletin  
17551-100

January 1993

# List of Materials

## Acceptable for Use on Telephone Systems of REA Borrowers

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UNITED STATES DEPARTMENT OF AGRICULTURE  
Rural Electrification Administration

REA BULLETIN 1755I-100

**SUBJECT:** List of Materials Acceptable for Use on Telephone Systems of REA Borrowers

**TO:** All REA Telephone Borrowers

**PUBLICATION DATE:** Date of Administrator's signature below

**EXPIRATION DATE:** Not to exceed three years from publication date

**OFFICE OF PRIMARY INTEREST:** Chairman, Technical Standards Committee "A" (Telephone), Telecommunications Standards Division

**PREVIOUS INSTRUCTIONS:** The publication of this bulletin replaces REA Bulletin 1755I-100 dated January 1991, and the 11 subsequent supplements issued since January 1991. This issuance constitutes a new base issue of the List of Materials Acceptable for Use on Telephone Systems of REA Borrowers [List of Materials (Telephone)] which, for the next two years, will be updated to reflect additions, deletions and corrections by the issuance of supplements as needed.

**FILING INSTRUCTIONS:** Discard REA Bulletin 1755I-100, dated 1991 and all supplements dated 1991 and 1992, and replace them with the attached issue of REA Bulletin 1755I-100.

**PURPOSE:** To provide a convenient informational reference list of the items of materials and equipment that have been determined by REA to be acceptable for use on telephone systems of REA borrowers. The Publication Date cited above is the approval date of the publication of this issue and not necessarily the date of REA acceptance of the items of material or equipment listed. Acceptances, removals or other actions relating to REA's acceptance of items of material and equipment are the result of decisions which are made by the Administrator of REA, by Technical Standards Committee "B" (Telephone), or Technical Standards Committee "A" (Telephone). Effective dates of acceptances or removals are as of the effective date of final action taken by the aforementioned.

  
\_\_\_\_\_  
Administrator

2/22/93  
Date



## PREFACE

This List of Materials (Telephone) supersedes all preceding issues including supplements. It reflects all actions of the Technical Standards Committees "A" and "B" (Telephone) through January 31, 1993, and includes changes in listings due to additions, deletions, and corrections made through Meeting No. 655 of Technical Standards Committee "A" (Telephone). Supplements reflecting changes in the List of Materials (Telephone) will be issued periodically and should be inserted in order to keep your copy up-to-date.

The small letters used to designate many construction items listed herein correspond to the letters used on construction drawings to indicate individual items of material; however, many equipment items have been assigned letter combinations only as a means of identification within the List of Materials (Telephone).

The acceptance of an additional item or the deletion of an existing item is a function of the REA Administrator and Technical Standards Committees "A" and "B" (Telephone). Anyone desiring to have a new item placed on the List of Materials (Telephone), or believing an existing item should be removed from the List of Materials (Telephone), is invited to submit the matter to Technical Standards Committee "A" (Telephone). Any communication calling attention to an error, an obsolete item, etc., will also be appreciated. All communications should be addressed to the Chairman, Technical Standards Committee "A" (Telephone), Rural Electrification Administration, Washington, D.C. 20250-1500.

The inclusion of an item in the List of Materials (Telephone) does not indicate that that item's manufacturer or its principals have not been debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded pursuant to Executive Order 12549, Debarment or Suspension, or any rules or regulations issued thereunder, including 7 CFR Part 3017 ("Debarment Regulations"). Therefore, borrowers must comply with the requirements imposed by the Debarment Regulations before entering into any "covered transaction," as defined by 7 CFR Part 3017, involving any item on this List of Materials (Telephone).







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\*Item no longer listed.

# WIRE AND CABLE

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#### ORDERING INFORMATION

When ordering wire and cable having a standard REA Unit Designation, this designation must be specified with the appropriate suffix or combinations of suffixes to indicate the type to be supplied. For example, filled cable with gopher-resistant shield containing copper and having compartmental cores (Screened) would be designated "BFCYH".



na - Aerial and Underground Cable

REA Standard Designation "C" (Air Core) REA Specification PE-22

These manufacturers' cables shown by X's comply with REA Specification PE-22.

REA Standard Designation Suffixes

<u>Manufacturer</u>	<u>C</u>				<u>H1C</u>		
	<u>A, C, H, P</u>						
	<u>19 AWG</u>	<u>22 AWG</u>	<u>24 AWG</u>	<u>26 AWG</u>	<u>19 AWG</u>	<u>22 AWG</u>	<u>24 AWG</u>
Alcatel	X	X	X	X	-	-	-
AT&T Technologies <sup>(1)</sup>	X	X	X	X	-	-	-
Essex	X	X	X	X	-	X	-
General Cable <sup>(1)</sup>	X	X	X	X	X	X	X
Independent Cable <sup>(2)</sup>	-	X	-	-	-	-	-
Superior Cable	X	X	X	X	X	X	X

**Suffixes:**

Coated Aluminum Shield----- A  
 5 mil Copper Shield----- C  
 Screened Cable for T1 Carrier----- H  
 Screened Cable for T1C Carrier----- H1C  
 Preconnectorized Cable for 100 Pairs and greater----- P

Notes: (1) Not accepted for suffix P.  
 (2) Not accepted for suffixes H and P.

sc - Buried Cable

REA Standard Designations "BFC", "CW", and "UF" (Filled) REA Specification PE-39

These manufacturers' cables shown by X's comply with REA Specification PE-39

<u>Manufacturer</u>	<u>REA Standard Suffixes</u>						
	<u>A(1)</u>	<u>C(1)</u>	<u>Y(1)</u>	<u>X(1)</u>	<u>H(1)</u>	<u>H1C(2)</u>	<u>P(1)</u>
Alcatel	X	X	X	X	X	-	X
AT&T Technologies	X	X	X	X	-	-	-
Essex Group, Inc.	X	X	X	X	X	X	X
General Cable	X	X	X	X	X	X	-
Independent Cable <sup>(3)</sup>	X	X	X	-	-	-	-
Superior Cable	X	X	X	X	X	-	X

**Suffixes:**

Coated Aluminum Shield -----A  
 5 Mil Copper Shield -----C  
 Gopher-Resistant Shield Containing Copper -----Y  
 Gopher-Resistant Shield/Armor Design -----X  
 Screened Cable for T1 Carrier -----H  
 Screened Cable for T1C Carrier -----H1C  
 Preconnectorized Cable 100 pairs and greater -----P

**Notes:**

- (1)Available in 19 through 26 AWG conductor sizes.
- (2)Available in 19 through 24 AWG conductor sizes.
- (3)Not accepted for 26 AWG conductor sizes.

sc - Buried Cable

REA Standard Designation "BFCE" (Expanded Insulation - Filled) REA Specification PE-89.

These manufacturers' cables shown by X's comply with REA Specification PE-89.

REA Standard Designation Suffixes

BFCE

A, C, Y, X, H, P

H1C

<u>Manufacturer</u>	<u>19 AWG</u>	<u>22 AWG</u>	<u>24 AWG</u>	<u>26 AWG</u>	<u>19 AWG</u>	<u>22 AWG</u>	<u>24 AWG</u>
Alcatel <sup>(1)</sup>	X	X	X	X	-	-	-
AT&T Technologies <sup>(1)(3)</sup>	X	X	X	X	-	-	-
Essex <sup>(2)</sup>	X	X	X	X	-	X	X
General Cable <sup>(1)</sup>	X	X	X	X	-	-	-
Superior Cable <sup>(1)</sup>	X	X	X	X	-	-	-

**Suffixes:**

Coated Aluminum Shield----- A  
 5 Mil Copper Shield----- C  
 Gopher-Resistant Shield Containing Copper----- Y  
 Gopher-Resistant Shield/Armor Design----- X  
 Screened Cable for T1 Carrier----- H  
 Screened Cable for T1C Carrier----- H1C  
 Preconnectorized Cable 100 pairs and greater----- P

- Notes: (1) Accepted for only foam/skin.  
 (2) Accepted for foam and foam/skin.  
 (3) Not accepted for suffix P.

1.3  
1-93  
ct

Manufacturer

ct - Terminating (TIP) Cable<sup>(1)</sup>  
REA Specification PE-87

These manufacturers' cables shown by X's comply with REA Specification PE-87.

REA Standard Designation Suffixes

	<u>A</u>	<u>H</u>	<u>P</u>
General Cable <sup>(2)</sup>	X	-	-

**Suffixes:**

Coated Aluminum ----- A  
Screened Cable for T1 Carrier ----- H  
Preconnectorized Cable 100 Pairs and Greater ----- P

Notes: (1) To be supplied in only 22 and 24 AWG sizes.  
(2) Accepted for core wrap of 3 mils or greater.

Manufacturer

sa - Buried Service Wire

These manufacturers' filled buried wires shown by X's comply with REA Specification PE-86.

REA Standard Designation

SEB (Service)

Essex	X
Independent Cable	X
Superior Cable	X



1.5  
1-93  
nt

Manufacturer

nt - Aerial Drop Wire

REA Standard Designations "SEA" and "SEK"

nt-a Copper Covered Steel Reinforced Aerial Drop Wire

(These manufacturers' wires shown by catalog designations for "nt-a" comply with REA Specification PE-7)

	<u>Neoprene</u>	<u>Plastic</u>		<u>Plastic</u>				
			<u>Std</u>		<u>Reduced</u>	<u>Super - Reduced</u>		
			<u>oval</u>	<u>dumbbell</u>	<u>oval</u>	<u>dumbbell</u>	<u>oval</u>	<u>dumbbell</u>
AT&T Technologies	---	---	ASW-1/18-1/2-F	---	---	---	---	---
General Cable/ Alphaduct	---	---	ADR-182-PVC	---	---	---	---	---
Superior Cable	---	ADP	ADP-D	---	---	ADP/SR	ADP/SR-D	

nt-b Nonmetallic Reinforced Aerial Drop Wire

	<u>One-Pair</u>	<u>Two-Pair</u>
Independent Cable	---	2X22-FRASW

Manufacturer

wf - Self-Supporting Cable

Those manufacturers shown by X's comply with REA Specification PE-38.

REA Standard Designation Suffixes

	<u>CF</u>			
	<u>A</u>	<u>C</u>	<u>H</u>	<u>P</u>
Alcatel	X	X	X	X
Essex	X	X	X	X
General Cable	X	X	X	-
Okonite	X	X	X	-
Superior Cable	X	X	X	X

Suffixes:

Coated Aluminum Shields-----A  
 5 Mil Copper Shields-----C  
 Compartmental Core (Separated Core) For Digital Carrier-----H  
 Preconnectorized Cable 100 Pair and Greater-----P

oc - Fiber Optic Cable

REA Standard Designations "BFO", "CO", and "UO" (Filled) REA Specification PE-90

These manufacturers' cables shown by catalog designations comply with REA Specification PE-90

oc-a Unit Core or Central Core Tube Fiber Core Construction

<u>Manufacturer</u>	<u>REA Standard Suffixes</u>					
	<u>Cable Construction</u>					
	<u>A(1)</u>	<u>B(1)</u>	<u>C</u>	<u>D</u>	<u>P(2)</u>	<u>Mode</u> <u>s</u> <u>m</u>
Alcatel	-	-	Unitube	-	-	X   X
AT&T/AT&T Fitel	-	4DNX-REA	4DHX-REA	-	(X) P-REA	X   -
	-	-	4DMX-REA	-	(X) P-REA	X   -
	-	-	4DSX-REA	-	(X) P-REA	X   -
	-	-	4DRX-REA	-	(X) P-REA	X   -
	-	-	C2	-	-	X   -
Siecor	-	EST-MICRO <sup>(4)</sup> EST <sup>(4)</sup>	-	EST-MICRO <sup>(4)</sup> EST <sup>(4)</sup>	(X) P-REA	X   X
	-	-	-	MAXI- BUNDLE <sup>R</sup> (4)	(X) P-REA	X   X
	-	-	-	-	(X) P-REA	X   X
Sumitomo Electric	SE-3LD	SE-3LK(4)	SE-3LB	SE-3LA(4)	-	X   -

# oc - Fiber Optic Cable

REA Standard Designations "BFO", "CO", and "UO" (Filled) REA Specification PE-90

These manufacturers' cables shown by catalog designations comply with REA Specification PE-90

## oc-b Multiple Loose Tube Fiber Core Construction (3)

### REA Standard Suffixes

#### Manufacturer

#### Cable Construction

	E(1)	F(1)	G	H	P(2)	Mode	
						s	m
Alcatel	ASM-R	ANM-R	ARM-R	AAM-R	-	X	X
Alcoa Fujikura	-	L1H11601	-	L1H12601	-	X	-
AT&T/AT&T Fitel	FG-D	FG-1	FG-K	FG-N	-	X	-
Pirelli Cable	S21CS-LTCCSJB	S21CS-LTEGSJB	S21CS-LTCCSAB	S21CS-LTEGSAB	-	X	-
Siecor	MINI-BUNDLE <sup>R</sup>	MINI-BUNDLE <sup>R</sup>	MINI-BUNDLE <sup>R</sup>	MINI-BUNDLE <sup>R</sup>	(X)P-REA	X	X
	-	-	MINI-BUNDLE <sup>R</sup>	MINI-BUNDLE <sup>R</sup>	(X)P-REA	X	X
	-	-	LITE <sup>R</sup>	LITE <sup>R</sup>			
Sumitomo Electric	SE-3HK	SE-3GK	SE-3HA	SE-3GA	-	X	-
Superior TeleTec	-	LE8DD	-	LE8DS	-	X	-
	-	LE5DD	-	LE5DS	-	-	X

See page 1.7.2 for suffixes and notes.

Suffixes

- A - Nonarmored with Metallic Strength Members Embedded in Jacket
- B - Nonarmored with Dielectric Strength Members Embedded in Jacket
- C - Armored with Metallic Strength Members Embedded in Jacket
- D - Armored with Dielectric Strength Members Embedded in Jacket
- E - Nonarmored with Metallic Central Strength Member
- F - Nonarmored with Dielectric Central Strength Member
- G - Armored with Metallic Central Strength Member
- H - Armored with Dielectric Central Strength Member
- P - Preconnectorized Cable
- s - Single Mode
- m - Multi-Mode

Notes:

- (1)Aerial and duct use only.
- (2)Replace (X) with manufacturer's catalog designation shown in the listing for Cable Construction Types A through H.
- (3)May contain multiple fibers per tube.
- (4)Not embedded in jacket; surrounds central core tube.

HOUSINGS, SPLICE CASES, ETC.

SECTION 2





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Terminals, wire, pole-mounted.....	wt .....	2.9



pl - Splice Closure

<u>Manufacturer</u>	<u>Max. Cable Dia.</u> (6)	<u>Straight</u>	<u>Branch</u>	<u>Encapsulant</u> (2)
---------------------	----------------------------	-----------------	---------------	------------------------

a - Aerial Splice Closure for Copper Cables

Free-Breathing

AT&T Technologies	1.2"	1900WE-A1S	1900WE-A1S	--
	1.8" *	1900WE-B1S	1900WE-B1S	--
	2.5" *	1900WE-C1S	1900WE-C1S	--

\*The branch type will accommodate maximum cable dia. of 2.2" and 3.0" respectively.

Communications	1.00"	C-3500	C-3500	--
Technology Corp.	1.50"	C-3501	C-3501	--
	1.75"	C-3502	C-3502	--
	2.125"	C-3503	C-3503	--
	2.75"	C-3504	C-3504	--
	3.125"	C-3505	C-3505	--
	4.50"	C-3506	C-3506	--
	6.00"	C-3507	C-3507	--
	7.50"	C-3509	C-3509	--
	9.00"	C-3508	C-3508	--

GATM	1.50"	92000	92000	--
	2.50"	95000	95000	--
	4.00"	97000	97000	--

3M Company	1.00"	A2-RB	A2-RB	--
	1.50"	A3-RB	A3-RB	--
	2.00"	A4-RB	A4-RB	--
	2.50"	A5-RB	A5-RB	--
	3.54"	A6-RB	A6-RB	--
	3.68"	A7-RB	A7-RB	--
	3.96"	A9-RB	A9-RB	--
	1.00"	SLic 2X19 FB(7)	SLic 2X19 FB(7)	--
	1.00"	SLic 2X29 FB(7)	SLic 2X29 FB(7)	--
	1.60"	SLic 3X33 FB(7)	SLic 3X33 FB(7)	--
	2.20"	SLic 5X33 FB(7)	SLic 5X33 FB(7)	--
	3.80"	SLic 7X33 FB(7)	SLic 7X33 FB(7)	--

Raychem	0.90"	TRAC - AA	TRAC - AA	--
	1.50"	TRAC - A	TRAC - A	--
	1.90"	TRAC - B	TRAC - B	--
	2.60"	TRAC - B+	TRAC - B+	--
	3.30"	TRAC - C	TRAC - C	--

See page 2.s1.4 for notes.

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1-93  
pl

pl - Splice Closure

<u>Manufacturer</u>	<u>Max. Cable Dia.</u> (6)	<u>Straight</u>	<u>Branch</u> (4)	<u>Encapsulant</u> (2)
---------------------	----------------------------	-----------------	-------------------	------------------------

a - Aerial Splice Closure for Copper Cables

Pressurized

Preformed Line	2.2"	8006021	8006021	--
Products	4.1"	8006022	8006022	--
	6.85"	8006023	8006023	--
	4.1"	8006024	8006024	--
	6.85"	8006025	8006025	--
	10.1"	8006177	8006177	--
	10.1"	8006219	8006219	--
	10.1"	8006220	8006220	--
	10.1"	8006221	8006221	--
PSI Telecomm.	1.0"	2X2AA	2X2AA	--
(510 Version)	1.0"	2Y2AA	2Y2AA	--
	1.6"	2A2	2A2	--
	2.9"	2B2	2B2	--
	3.5"	2C2	2C2	--
	3.5"	2D2	2D2	--
	4.5"	2E2	2E2	--

b - Buried Splice Closure for Copper Cables

Filled

Brand-Rex	1.42"	SG 95-2	--	Splicegard
	1.42"	SG 155-4	SG 155-4	Liquid
3M	1.0"	8982-4462/GEL	--	4442GEL
	1.2"	--	BB2 x 24 4462/GELLA SC, DC-LHS	
	1.5"	8983-4462/GEL	--	
	1.7"	--	BB3 x 24 4462/GELLA SC, DC-LHS	
	2.0"	8984-4462/GEL	BB4 x 24 4462/GELLA SC, DC-LHS	
	2.4"	8985-4462/GEL	BB5 x 26 4462/GELLA SC, DC-LHS	
	3.33"	8986-4462/GEL	--	
	3.3"	--	BB6 x 26 4462/GELLA 2DC-LHS	
	3.6"	--	BB7 x 26 4462/GELLA 2DC-LHS	
	3.8"	--	BB9 x 26 4462/GELLA 2DC-LHS	

See page 2.1.4 for notes.

<u>Manufacturer</u>	<u>Max. Cable Dia.</u> <sup>(6)</sup>	<u>Straight</u>	<u>Branch</u>	<u>Encapsulant</u> <sup>(2)</sup>
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b - Buried Splice Closure for Copper Cables

Filled (Cont'd)

Preformed Line	2.2"	8006287	8006287	RD
Products	4.1"	8006288	8006288	RD
	4.1"	8006289	8006289	RD
	7.1"	8006290	8006290	RD
	7.1"	9006291	8006291	RD
	7.1"	8006292	8006292	RD
	10.1"	8006293	8006293	RD
	10.1"	8006294	8006294	RD
	10.1"	8006295	8006295	RD
PSI Telecomm.	1.0"	9P212(*)-515	9P212(*)-515	D-Plus
	1.0"	9P224(*)-515	9P224(*)-515	
	2.0"	9P324(*)-515	9P324(*)-515	
	2.0"	9P424(*)-515	9P424(*)-515	
	2.5"	9P526(*)-515	9P526(*)-515	
	3.7"	9P726(*)-515	9P726(*)-515	
	4.0"	9P926(*)-515	9P926(*)-515	

\*Insert end cap configuration per manufacturer.

Raychem	1.2"	XAGA-1650-REA/E-S	XAGA-1650-REA/E-S	Caschem 126
	1.8"	XAGA-1650-REA/E-A	XAGA-1650-REA/E-A	
	2.5"	XAGA-1650-REA/E-B2	XAGA-1650-REA/E-B2	
	3.0"	XAGA-1650-REA/E-C2	XAGA-1650-REA/E-C2	
	3.9"	XAGA-1650-REA/E-D2	XAGA-1650-REA/E-D2	
	3.9"	XAGA-1650-REA/E-D4	XAGA-1650-REA/E-D4	

c - Underground Splice Closure (Manhole) for Copper Cables

Filled

Brand-Rex	1.42"	SG 95-2	--	Splicegard
	1.42"	SG 155-4	SG 155-4	Liquid

See page 2.1.4 for notes.

pl - Splice Closure

<u>Manufacturer</u>	<u>Max. Cable Dia.</u> <sup>(6)</sup>	<u>Straight</u>	<u>Branch</u>	<u>Encapsulant</u> <sup>(2)</sup>
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c - Underground Splice Closure (Manhole) for Copper Cables

Pressurized

Communications Technology	1.0"	C-5100	C-5105	--
	1.6"	C-5101	C-5106	--
	2.2"	C-5102	C-5107	--
	3.0"	C-5103	C-5108	--
	3.0"	C-5104	C-5109	--
Preformed Line Products	2.2"	8006021	8006021	--
	4.1"	8006022	8006022	--
	6.85"	8006023	8006023	--
	4.1"	8006024	8006024	--
	6.85"	8006025	8006025	--
	10.1"	8006219	8006219	--
	10.1"	8006220	8006220	--
PSI Telecomm. (510 Version)	2.9"	2B2	2B2	--
	3.5"	2C2	2C2	--
	3.5"	2D2	2D2	--
	1.0"	2X2AA	2X2AA	--
	1.0"	2Y2AA	2Y2AA	--
	1.6"	2A2	2A2	--
	4.5"	2E2	2E2	--

d - Buildings and Central Office Vault Splice Closure for Copper Cables<sup>(3)</sup>

Non-Filled

	<u>Non-Flame Retardant</u>	<u>Flame Retardant</u>
AT&T	-	2000 FR Series
3M Company (Kohler & Besser)	K & B Series	K&B Series <sup>(5)</sup>
PSI Telecommunications	2 * 2 (*)	2 * 4 (*)
Preformed Line Products	8006 Series	8006 FR Series

\*Insert inner diameter and cover length identifying data according to manufacturer's instructions.

See page 2.1.4 for notes.

pl - Splice Closure

<u>Manufacturer</u>	<u>Max. Cable Dia.</u>	<u>In-Line</u>	<u>Butt</u>	<u>Branch</u>	<u>Encapsulant</u> <sup>(2)</sup>
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e - Aerial Splice Closure for Fiber Optic Cables<sup>(1)</sup>

Filled

AT&T	--	2000/UCB1 <sup>(8)</sup>	2000/UCB1 <sup>(8)</sup>	2000/UCB1 <sup>(8)</sup>	D-1000
Preformed Line Products	--	8001006	8001005	8001006	RD

f - Buried Splice Closure for Fiber Optic Cables<sup>(1)</sup>

Filled

AT&T	--	2000/UCB1 <sup>(8)</sup>	2000/UCB1 <sup>(8)</sup>	2000/UCB1 <sup>(8)</sup>	D-1000
3M	--	2177-R	2177-R	2177-R	4442
Preformed Line Products	--	8001006	8001005	8001006	RD

g - Buildings and Central Office

Vault Splice Closure for Fiber Optic Cables

Non-Filled

Non-Flame Retardant

Flame Retardant

AT&T	--	UCB1
Preformed Line Products	--	8001010 8001011

Notes: <sup>(1)</sup>Fiber organizer trays shall be ordered in accordance with manufacturer's instructions.

<sup>(2)</sup>The encapsulant is a component part of the splice closure system and shall be provided by the closure manufacturer. The encapsulant is not accepted on an individual basis.

<sup>(3)</sup>The main cable diameter, cable configuration (number of cables, pair count and gauge), and splice bundle diameter should be specified by the engineer.

<sup>(4)</sup>3M Better Buried closures are accepted for Branch splicing only.

<sup>(5)</sup>For vertical installations order standard closure with "K&B Fire Shield Sleeve."

<sup>(6)</sup>Metric sizes available for the following manufacturers: 3M.

<sup>(7)</sup>The SLiC TB Terminal Bracket Kit and 3M 5550 terminal blocks may be used for ready access applications only.

<sup>(8)</sup>Use AT&T ordering code 106711534.

<u>Manufacturer</u>	<u>Type Conduit</u>	<u>Catalog Number</u>
<u>hc - Underground Conduit</u>		
Allwire, Inc.	Flexible plastic	ALLDUCT
American Pipe & Plastic	Plastic	Type B, C, and D
Apache Plastics, Inc.	Plastic	Type EB and Type DB
ARMCO	Plastic	Smooth-Cor Type B and Type C
Bay Plastics, Inc.	Plastic	Type B and Type C
Can-Tex	Plastic Plastic	Type EB and Type DB Type B, C, and D
Carlton	Plastic Plastic	Type EB and Type DB Type B, C, and D
Certain-Teed Products Corp.	Plastic	Type EB and Type DB
CIBA-GEIGY <sup>(1)</sup>	Fiberglass	T & D Conduit
Condux International, Inc.	Concrete Plastic	Condux Type EB and Type DB
Freedom Plastics, Inc.	Plastic	Type C
Hercules, Inc.	Flexible plastic	Corflo plastic conduit
Hurlbut Plastic Pipe	Plastic	Type C
Ingomar Plastic Pipe	Plastic	Type B and Type C
J-M Manufacturing Company	Plastic	Types C, EB, and DB
Kyova	Plastic	Type EB and Type DB
LCP Plastics	Plastic	Type EB and Type DB
National Pipe	Plastic	Type B and Type C
Northern Pipe Products	Plastic	Type B, C, and D
Pacific Plastic Pipe	Plastic	Type EB and Type DB
Phillips Products Co., Inc.	Flexible plastic	Driskon 3200

See page 2.2.1 for notes.



<u>Manufacturer</u>	<u>Type Conduit</u>	<u>Catalog Number</u>
<u>hc - Underground Conduit</u>		
Phone Ducs	Plastic	Multiple plastic conduit (4, 6, & 9 Way)
Pyramid Industries	Plastic	Type EB and Type DM
Quail Plastics	Plastic	Type EB and Type DB
Queen City Plastics	Plastic	Type EB and Type DB
River City Plastics	Plastic	Type EB and Type DB
Sedco	Plastic	Type EB and Type DB
Tridyn Industries	Plastic	Type EB and Type DB
Vassallo Industries	Plastic	Type B and Type C
Western Plastics	Plastic	Type EB and Type DB

Note: For fiber and plastic conduit, Type I, Type B or Type EB is for concrete encasement and Type II, Type C or Type DB may be directly buried. Type D is for exposed installation, as on bridges.

(1) Filament wound fiberglass/epoxy conduit.

er - Cable Enclosures

Ready Access Enclosures

Lashed Cables

<u>Manufacturer</u>	<u>Main Cable Dia. Range</u>	<u>Straight</u>	<u>Branch</u>
Cook	0.4-1.2"	50 E/W 81-1585	50Y E/W 81-1585
Reliance Comm/Tec (Reliable)	0.4-1.2"	100 MB-P10318	100 MBY-P10318
Cook	1.2-2.5"	150 E/W 81-1588	150Y E/W 81-1588
Reliance Comm/Tec (Reliable)	1.2-2.0"	200MB-P10709	200MBY-P10709
Reliance Comm/Tec (Reliable)	2.0-3.0"	430	430Y

Figure 8 Cables

Cook	0.4-1.2"	50	50Y
Reliance Comm/Tec (Reliable)	0.4-1.2"	100MB	100MBY
Cook	1.2-2.5"	150	150Y
Reliance Comm/Tec (Reliable)	1.2-2.0"	200MB	200MBY
Reliance Comm/Tec (Reliable)	2.0-3.0"	430	430Y

Manufacturer

er - Cable Enclosures  
Ready-Access Enclosures

Strand-mounted, with two branch entrances (for lashed cables)

	<u>Type E</u>		<u>Type F</u>	
	<u>1.2" Maximum 0.75" Maximum</u>	<u>2.2" Maximum 1.6" Maximum</u>		
Diameter of main: Diameter of branch:				
Type of strand:	<u>Galvanized Steel</u>	<u>Alum.-Clad Steel</u>	<u>Galvanized Steel</u>	<u>Alum.-Clad Steel</u>
Cook Electric	50Y E/W 81-1512 & 81-1585	50Y E/W 81-1512 & 81-1585	150Y E/W 81-1532 & 81-1588	150Y E/W 81-1532 & 81-1588
Reliance Comm/Tec (Reliable)	200MBY	200MBY	200MBY	200MBY

e/w Terminal Blocks

Strand-mounted (for Lashed and Figure 8 cables)

	<u>Main Cable Dia. Range</u>	<u>Branch Cable Dia. Range</u>	<u>5-Pair</u>	<u>10-Pair</u>	<u>12-Pair</u>	<u>15-Pair</u>	<u>20-Pair</u>	<u>25-Pair</u>
GATM(1)	0.30-1.50" 0.40-2.50" 0.50-4.00"	0.03-1.50" 0.40-2.50" 0.50-4.00"	-	92010 95010 97010	-	-	92020 95020 97020	92025 95025 97025
3M	0.04-2.50"	0.20-1.60"(3)	IDC-5-3	IDC-10-3	-	IDC-15-3	-	-
Raychem(1)(2)	0.55-1.90"	0.00-1.50"	-	DTerminator ICT - 10 REA	DTerminator ICT - 12 REA	-	DTerminator ICT - 25 REA	-

Notes: (1)The numbers shown only include the unprotected versions of the RGA-type terminal blocks.

(2)Sheath opening is limited to 22" with a Splice Bundle size of 4".

(3)Terminal is shipped with single part end seals. Order double or triple end port seals for branch cable installations in accordance with manufacturer's instructions.

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hh

Manufacturer

Catalog Number

hh - Handholes<sup>(1)</sup>

Handholes for Copper Systems

Associated Plastics	1324-1 1730-1 PH 3660/36-1 PH 3660/18-1
Brooks Products	1324 1730
Carson Industries	1730-13B
CDR Systems (Homac)	TA 10-1324-18 TA 10-1730-18 TA 10-3660-18 TA 10-3660-36
Pen-Cell Plastics	PE-10 PE-20 (Restricted to cable sizes up to 100 pairs) PE-36
Quazite	PC1324 PC1730 PX1324 PX1730

Handholes for Fiber Optic Systems

Associated Plastics	5430-1 5440-1
CDR Systems (Homac)	TA 10-3660-18F TA 10-3660-36F
Coastal Engineered Products	38-00520 38-00521 38-00522 38-00523
Quazite	PG2436 PG3048 LG3060 LG3660 LR2732

Notes: <sup>(1)</sup>Not for use in areas subject to vehicular traffic.

Manufacturer

se - Buried Plant Housings  
(Complies with PE-35)

Type BD Pedestals

Listed manufacturers are accepted to supply housing types as indicated by X's.

Type H Pedestals

	<u>Series</u>	<u>Notes</u>	<u>Pedestal Mounted</u>					<u>Pole Mounted</u>			
			<u>BD2</u>	<u>BD3</u>	<u>BD4</u>	<u>BD5</u>	<u>BD7</u>	<u>BD2A</u>	<u>BD3A</u>	<u>BD4A</u>	<u>BD5A</u>
Champion Electrofab Inc.	(BD)	(1)(2)(3)	X	X	X	X	X	X	X	X	X
Coastal Engineered Products Inc.	(BD)	(2)(3)	X	X	X	X	-	X	X	X	X
Coil Sales	(BD)	(2)(3)	X	X	X	X	X	X	X	X	X
Communications Technology Corp.	(BD)	(1)(2)(3)	X	X	X	X	-	X	X	X	X
Pyramid Industries	(BD)	(1)(2)(3)(7)	X	X	X	X	X	X	X	X	X
Reliance Comm/Tec (Reliable)	(UPC/BD)	(1)(2)(3)(7)	X	X	X	X	X	X	X	X	X

See page 2.5.2 for notes.

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1-93  
se

Manufacturer

Designation

se - Buried Plant Housings  
(Complies with PE-35)

Type BD Pedestals

Listed manufacturers are accepted to supply housing types as indicated by X's.

Type M Pedestals

			<u>Pedestal Mounted</u>			<u>Pole Mounted</u>			<u>Pole Mounted (Increased Hgt. Above Grd.)</u>		
			<u>BD11</u>	<u>BD12</u>	<u>BD13</u>	<u>BD11A</u>	<u>BD12A</u>	<u>BD13A</u>	<u>BD11AG</u>	<u>BD12AG</u>	<u>BD13AG</u>
Coastal Engineered Products, Inc.	(BD)	(2)(3)	-	X	X	X	X	X	X	X	X
Coil Sales	(BD)	(2)(3)	X	X	X	X	X	X	X	X	X
			<u>BD14</u>	<u>BD15</u>	<u>BD16</u>	<u>BD14A</u>	<u>BD15A</u>	<u>BD16A</u>	<u>BD14AG</u>	<u>BD15AG</u>	<u>BD16AG</u>
Coastal Engineered Products, Inc.	(BD)	(2)	X	X	-	X	X	-	X	-	-
Coil Sales	(BD)	(2)(3)	X	X	X	X	X	X	X	X	X

See page 2.5.2 for notes.

ManufacturerDesignationse - Buried Plant HousingsType BDS Serving Area Interface Cabinet<sup>(4)</sup>

Complies with PE-79 dated 1/78)

	<u>Terminal Type</u>				<u>Modules or Blocks Size by Pair Count</u> <sup>(5)</sup>
		<u>BDS100</u>	<u>BDS200</u>	<u>BDS300</u>	
3M	3M Module	4065 <sup>(6)</sup>	4082	4086	25
	3M SS Block	4365 <sup>(6)</sup>	4382	4386	25
Reliance Comm/Tec (Reliable)	3M Module	UPC/BDS-100	UPC/BDS-200	UPC/BDS-300	25
	Reliable Block	UPC/BDS-100	UPC/BDS-200	UPC/BDS-300	25

Fiber Optic Splice Case Housings

	<u>Stake Mounted</u>	<u>Pad Mounted</u>	<u>Pole Mounted</u>
Champion Products	OFC-BD7 <sup>(8)(9)</sup>	OFC-BD7 <sup>(8)(9)</sup>	OFC-BD7 <sup>(8)</sup>
Reliance Comm/Tec (Reliable)	OPFO-BD7PD <sup>(8)(9)</sup>	OPFO-BD7PD <sup>(8)(9)</sup>	OPFO-BD7PL <sup>(8)</sup>

Notes: <sup>(1)</sup>Internal offset brackets for the BD3, BD4, and BD5 sizes are available upon request.

<sup>(2)</sup>Grounding connectors for field mounting within the housings for terminating #6 AWG solid copper ground wire are available upon request.

<sup>(3)</sup>Good housekeeping panels are available upon request, sizes BD3 and above. When ordering, suffix the catalog number with the letter "H".

<sup>(4)</sup>SAI housings equipped with two doors, front and back are also available upon request.

<sup>(5)</sup>Use the block or module recommended by the SAI manufacturer.

<sup>(6)</sup>May be pole mounted.

<sup>(7)</sup>BD7 may be pad mounted.

<sup>(8)</sup>Order mounting hardware for the intended splice case in accordance with the manufacturer's instructions.

<sup>(9)</sup>Order pad or stake mounting hardware in accordance with the manufacturer's instructions.

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sj

Manufacturer

Designation

sj - Central Office Splice Housings

(splice housings for copper cables)

	<u>Catalog Number</u>	<u>Tip Cable Openings</u>	<u>Cable Capacity</u>
Reliance Comm/Tec	CRF54ARV <sup>(3)</sup>	54	5400
(Reliable) <sup>(4)</sup>	CRF66ARV <sup>(3)</sup>	66	6600

(splice housings for fiber optic cables)

	<u>Catalog Number</u>	<u>Mech. Splices</u>	<u>Fiber Capacity</u>	<u>Fusion Splices</u>
3M <sup>(4)</sup>	8570 <sup>(1)(3)</sup>	144		192

(splice housings with patch panels for fiber optic cables)

	<u>Catalog Number</u>	<u>Mech. Splices</u>	<u>Fiber Capacity</u>	<u>Fusion Splices</u>
3M <sup>(4)</sup>	8171 <sup>(2)(3)</sup>	12		12
Porta. Systems	CPS-12 <sup>(4)(5)(6)</sup>	12		12
	CPS-24 <sup>(4)(5)(6)</sup>	24		24
	FOCUS <sup>TM</sup> <sup>(3)(7)(8)</sup>	48		48
	FOCUS <sup>TM</sup> <sup>(3)(7)(8)</sup>	72		72

- Notes: <sup>(1)</sup>Compatible with the 8173 Connector Module for the attachment of patch panel ports. Consult the manufacturer for ordering procedures.
- <sup>(2)</sup>Equipped with 12 ports suitable for ST single mode connectors. Consult the manufacturer for ordering procedures concerning 6, 12, and 24 port, biconic, FC, FC/PC, D4, or SMA options.
- <sup>(3)</sup>Accepted for use only in installations of communications equipment under the exclusive control of the communications utility in building spaces used exclusively for such installations.
- <sup>(4)</sup>Accepted for wall mounting only.
- <sup>(5)</sup>UL Listed and may also be used as a Fiber Optic Cable Building Entrance Terminal.
- <sup>(6)</sup>Consult the manufacturer for ordering procedures concerning both 12 port and 24 port, biconic, STPC, D4PC, FCPC, SCPC, or SMA906 connector options; fiber optic pigtail or jumper options; and fiber optic stub cable options.
- <sup>(7)</sup>Accepted for either wall or rack mounting.
- <sup>(8)</sup>Consult the manufacturer for ordering procedures concerning both 48 port and 72 port, biconic, ST, D4, FC, SC, or SMA connector options; fiber optic pigtail or jumper options; and fiber optic stub cable options.



Manufacturer

sk - Pedestal Restricted Access Inserts<sup>(1)</sup>

	<u>Catalog No.</u>	<u>Max. Splice Diameter</u>	<u>Maximum Splice Sizes</u>	
			<u>25xModules</u>	<u>Single Pair Connector</u>
3M	4634	57mm (2.25 in.)	100-Pair	50-Pair
	4635	102mm (4.0 in.)	400-Pair	100-Pair
	4636	140mm (5.5 in.)	900-Pair	300-Pair
Preformed Line Products	8006258	69mm (2.75 in.)	200-Pair	200-Pair
	8006259	113mm (4.5 in.)	400-Pair	400-Pair
	8006260	169mm (6.75 in.)	900-Pair	900-Pair
Raychem	RE-2	48mm (1.9 in.)	50-Pair	50-Pair
	RE-3	75mm (3.0 in.)	100-Pair	100-Pair
	RE-4	83mm (3.3 in.)	200-Pair	200-Pair
	RE-6	113mm (4.5 in.)	600-Pair	900-Pair
	GT-3 <sup>(2)</sup>	65mm (2.6 in.)	100-Pair	100-Pair
	GT-4 <sup>(2)</sup>	90mm (3.6 in.)	200-Pair	200-Pair
	GT-6 <sup>(2)</sup>	108mm (4.3 in.)	400-Pair	600-Pair
Reliance Comm/Tec (Reliable)	RSR3100	63.5mm (2.5 in.)	150-Pair	150-Pair
	RSR4200	63.5mm x 101.6mm (2.5 in. x 4 in.)	225-Pair	225-Pair

Notes: <sup>(1)</sup>Pedestal restricted inserts should not be filled. Splices that require filling should be placed in a splice case.

<sup>(2)</sup>Not recommended for areas susceptible to temporary flooding.

2.6  
1-93  
ps;sp

Manufacturer

Catalog Number

ps - Buried Plant Housing Sealer

W. R. Grace	Polycel 100			
J.A.D.E., Ltd.	PIG 375 3 oz Volume	54	Cu. In.	
	" 470 4 " "	84	" "	
	" 650 6 " "	126	" "	
	" 825 8 " "	171	" "	
	" 1050 10 " "	324	" "	
	" 1080 16 " "	540	" "	
3M	4411 - A Bag	45	" "	
	B Bag	95	" "	
	C Bag	250	" "	
	750 Gram Can	450	" "	
Semco	PR-850-2	100	" "	
	PR-850-6	277	" "	
	PR-850-8	387	" "	
	PR-850-20	1054	" "	

sp - Duct Sealer

3M	4416
Semco	PR-851

<u>Manufacturer</u>	<u>Base Size</u>	<u>Catalog Number</u>
<u>hm - Precast Concrete Manholes</u>		
Advance Concrete Products	12' x 5' x 6'-6"	A Manhole
	12' x 6' x 7'	A-1 "
	8' x 4' x 6'	SA "
	8' x 4' x 6'	SJ "
	12' x 6' x 7'	J3-1 "
	12' x 6' x 7'	High-Mount T Carrier
	12' x 6' x 9'-6"	Manhole
	4' x 4' x 6'-9"	Telephone Vault
Brooks Products (3)(4)	4' x 4'	REA 300FPB42T
	4' x 8'	REA 4080FM72
	4'-6" x 8'-6"	REA 510FM78
	5' x 10'-6"	REA 650FM78
	5' x 12'	REA 6000FM78
	6' x 12'	REA 6000FM84
	6' x 12'	REA 6000DM84
Dalworth Quikset (3)(4)(5)	3' x 5'	305
	4' x 4'	404
	4' x 5'-6"	406.5
	4' x 8'	408
	4' x 8'-6"	408A
	4' x 7'	507
	5' x 12'	512
	6' x 12'	612
	6' x 14'-9"	614
	6' x 15'	615
	7' x 7'	707
	8' x 10'	810
	12' x 12'	1212
DeKalb Concrete Products Inc. (3)(4)	2' x 2'	REA 222
	3' x 3'	REA 333
	4' x 4'	REA 444
	5' x 5'	REA 555
	6' x 6'	REA 666
	4' x 8'	REA 48-6
	5' x 10'-6"	REA 5106-6
	6' x 12'	REA 612-7
	8'-10" x 8'-10"	REA 810-810
	6' x 15'	REA 615-9
	12' x 12'	REA 1212

See page 2.7.3 for notes.

2.7.1  
1-93  
hm

<u>Manufacturer</u>	<u>Base Size</u>	<u>Catalog Number</u>
<u>hm - Precast Concrete Manholes</u>		
Foley-Brogdon <sup>(3)(4)</sup>	2' x 2'	Model 222
	3' x 3'	Model 333
	4'-2" x 4'-2"	Model 444
	6' x 6'	Model 6060
	4'-6" x 8'-6"	Model 8545
	5' x 10'-6"	Model 1050
	5' x 10'-6"	Model 1050S
	6' x 8'	Model 8060
	6' x 12'	Model 1260
	8' x 8'	Model 8080
	9' x 12'	Model 1290
	6' x 10'	Model 1060
Hartford Concrete Products <sup>(2)(3)(4)</sup>	5' x 10'	REA 10-5 Series <sup>(2)</sup>
	4' x 8'	REA 8-4 Series
	4' x 4'	REA 4-4-4
Jensen Pre-Cast Concrete Products Co.	4'-6" x 8'-6" x 6'-6"	REA PTS-65
	5' x 10'-6" x 7'	REA 38-5706-U-7
	6' x 12' x 7'	REA 384-4046-1
	4' x 4' x 4'	REA 4848
A.C. Miller Concrete Products Inc. <sup>(3)(4)(5)</sup>	3' x 3'	REA-3x3
	4' x 4'	REA-4x4
	4' x 6'	REA-4x6
	4' x 7'-9"	REA-18
	4'-6" x 10'-6"	REA-20
	5' x 12'	REA-38Y
	6' x 12'	REA-38Y
	6' x 6'	REA-6x6
	6' x 8'	REA-6x8
	5' x 10'-6"	REA-5x10.6
	8' x 8'	REA-8x8
	10' x 10'	REA-10x10
Ornamental Poles, Inc. <sup>(3)(4)</sup>	6'-0" x 12'-0"	REA-Y
Pre Cast Concrete Company, Inc.	5'-10" x 10'-4" x 7'2"	Type AA
Pre-Cast Manufacturing Company	3'-6" x 6'	T-36656
	6' x 12'	T-6127
	5' x 10'	T-5107

See page 2.7.3 for notes.

<u>Manufacturer</u>	<u>Base Size</u>	<u>Catalog Number</u>
<u>hm - Precast Concrete Manholes</u>		
R.C.P. Vaults (Division of Pacific International Pipe & Engineering, Inc.)	2'6" x 2'6" x 2'	76649 Handhole
	2'3" x 5'2-1/2" x 2'6"	25-TA Splicing Vault
	4'0" x 6'0" x 6'0"	466-TA
	5'0" x 9'0" x 7'2"	4484-TA
	5'0" x 9'0" x 7'2"	4484-TCA
	5'8" x 11'2" x 7'5"	5106-TA
	5'8" x 11'2" x 7'5"	5106-TCA
	6'0" x 12'0" x 7'0"	612-TA
	6'0" x 12'0" x 7'0"	612-TCA
	7'0" x 12'0" x 7'6"	712-CLS
	8'0" x 14'0"	814 (3)
Southeast Precast Concrete Products Inc. (3)(4)	6' x 12'	REA 127
	4' x 8'	REA 86
	5' x 10'	REA 510
	4' x 4'	REA 504
Utility Concrete (3)(4)	4' x 8'	RE Series
	3' x 4'	RE Series
	3' x 5'-6"	RE Series
	8' x 8'-6"	RE Series
Utility Precast Inc. (3)(4)(5)	6' x 12'	A Series
	5' x 10'	B Series
	4-1/2' x 8-1/2'	C Series
Utility Vault	4' x 6'	466TA (3)
	4'-2" x 4'-2"	504-LA (3)
	4'-2" x 6'-6"	577-LA (3)
	5'-10" x 10'-10"	510Y (3)
	6'-10" x 12'-10"	38-612-Y (3)
	2'3" x 5'2 1/2" x 2'4"	25 TA
	2'3" x 5'2 1/2" x 3'4"	253 TA
	3'1" x 6'7" x 4'1 1/2"	264 TA
	5' x 9' x 7'2"	4484-type
	5'4" x 9'4" x 7'6"	4686-type
	5'8" x 11'2" x 7'2"	5106-type
	6'1" x 11'7" x 7'5"	38Y-type
	8'8" x 10'8" x 8'6"	810 TA
	7'10" x 12'11" x 8'7"	712 LA
	8' x 14' x 6'6" through 12'	814-66 TA through 814-12 TA
	8' x 18' x 6'6" through 12'	818-66 TA through 818-12 TA
(Condux International™) (3)	12' x 6'	A4046-1
Winnebago Concrete Products	12' x 6'	J4046-3
Janesville Concrete Products	10' x 5'-6"	L4046-4
Chicago Pre-Cast Products	8'-6" x 10'-2"	T4046-5
	8' to 11' x 4' to 6'	C4046-6
	5' x 8' x 6'-6"	A4046-13

- Notes:**
- (1) These manholes come equipped with Alhambra Foundry A1083 cover or equivalent.
  - (2) Equipped with 27-inch frame and cover made by Dewery Brothers Foundry.
  - (3) Depth of the hole (headroom) must be indicated on the order.
  - (4) Type of manhole (A, J, L, T) must be indicated on the order.
  - (5) Extension sections may be ordered if required.

Manufacturer

Catalog Number

sd - Mobile Home Posts

Champion Metal Products	F-R8305 <sup>(5)</sup>	-
Coil Sales	3518 (Internally mounted protector)	3519 (Trailer mounted protector)
Garrett Mfg. Co. <sup>(2)(3)</sup>	GMHP-36 <sup>(2)(3)</sup> GUMP-36 <sup>(2)(3)</sup> IMP-36 <sup>(4)</sup>	GMHP-48 (3" x 6" plate) <sup>(2)(3)</sup> GUMP-48 (3" x 12" plate) <sup>(2)(3)</sup> IMP-48 (6" x 12" plate) <sup>(4)</sup>
Indiana Pressed Steel	THP-1E <sup>(1)</sup>	-
Pyramid Industries	SEP-36	SEP-46
Reliance Comm/Tec (Reliable)	MHP-36	MHP-48

- Notes: <sup>(1)</sup>Limited to use in noncorrosive areas only.  
<sup>(2)</sup>Additional 3" x 12" plates are also available.  
<sup>(3)</sup>Specify color - for green (gn) - for orange (on).  
<sup>(4)</sup>Available in light green only.  
<sup>(5)</sup>Adjustable to 3 feet, 3-1/2 feet, and 4 feet.

2.9  
1-93  
wt

Manufacturer

Catalog Number

wt - Pole Mounted Wire Terminals

Unprotected

	<u>1-Pair</u>	<u>6-Pair</u>	<u>10-Pair</u>	<u>25-Pair</u>	<u>50-Pair</u>
Raychem	--	--	PMT-10-FS <sup>(1)</sup> -REA	PMT-25-FS <sup>(1)</sup> -REA	PMT-50-FS <sup>(1)</sup> -REA
Reliance Comm/Tec (Reliable)	5533	--	--	--	--

Note: <sup>(1)</sup>Order stub cable length in accordance with manufacturer's instructions.



MISCELLANEOUS SPLICING MATERIALS

SECTION 3



	Item <u>Designation</u>	<u>Page</u>
Connectors, shield bonding.....	gh.....	3.1
"        splicing and cross-connecting.....	cm.....	3.1.1
Harnesses, bonding connector.....	gs.....	3.3
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"        rodent.....	rp.....	3.5
Signs, warning.....	sm.....	3.6
Sleeves, filled plastic.....	sv.....	3.4



Manufacturer

Catalog Number

gh - Shield Bonding Connectors

(Complies with PE-33)

gh-a Copper Cable and Wire Connectors

Cable Connectors

Service Wire Connectors

Outside Cable Diameters

	<u>Less than 1.0 inch</u>	<u>1.0 to 1.5 inch</u>	<u>Greater than 1.5 inch</u>	
A.K. Stamping	400-366-332 <sup>(4)</sup> (8544 B Bond #1)	400-366-340 (8544 B Bond #2)	400-366-357 (8544 B Bond #3)	-
Hubbell Premise Wiring	BC-285-S <sup>(2)</sup> BC-285-SB <sup>(3)</sup>	BC-875-SB	BC-875-SB	BC-285 <sup>(1)</sup> BC-285-S <sup>(2)</sup> BC-285-SB <sup>(3)</sup>
3M	4462SN	4462SN	4462SN	-
Northern Telecom	081-0401 (Bulldog)	081-0401 (Bulldog)	081-0401 (Bulldog)	-
Preformed Line Products	-	-	-	8000733 <sup>(1)</sup> (Servi-Bond)

gh-b Armored Fiber Optic Cable Connectors

Outside Cable Diameters

	<u>Less than 0.75 inch</u>	<u>Greater than 0.75 inch</u>
A.K. Stamping	400366332-MB (Mini B Bond)	-
3M	4460D	4460D

- Notes:
- (1) For use only at station protector.
  - (2) For use with ring terminal harness wires.
  - (3) For use with braid harness wires.
  - (4) Not to be used on cables less than 0.50 inches in diameter.

3.1.1  
1-93  
cm

Manufacturer

Catalog Number

cm - Connectors and Cross-Connecting Blocks

Splicing Connectors for Copper Conductors<sup>(2)</sup>

Splicing Connectors (1 Conductor) .

	<u>Moisture Resistant</u>	<u>Nonmoisture Resistant<sup>(1)</sup></u>
AMP	552678-2(3 wts) 552795-2 553017-2 (Half-Tap ts)	552795-4
3M Company	Scotchlok™ UR2 " UCC <sup>(5)</sup> " UY2 " UB2 " 211	Scotchlok™ UG

Splicing Connectors (1-Pair)

	<u>Moisture Resistant</u>	<u>Nonmoisture Resistant<sup>(1)</sup></u>
AT&T Technologies	709	--

Connector Modules (5-Pair)

	<u>Straight Splice</u>	<u>Bridge Splice</u>	<u>Half-Tap Splice</u>
AT&T (22-26 Awg) Technologies <sup>(6)</sup> (19-24 Awg)	710-SC1-5 710-SAL-5	710-BC1-5 710-BAL-5	710-TC1-5 710-TAL-5

Connector Modules (10-Pair)

	<u>Straight Splice</u>	<u>Bridge Splice</u>	<u>Half-Tap Splice</u>
AT&T (22-26 Awg) Technologies <sup>(6)</sup> (19-24 Awg)	710-SC1-10 710-SCL-10	710-BC1-10 710-BCL-10	710-TC1-10 710-TCL-10

Connector Modules (25-Pair)

	<u>Straight Splice</u>	<u>Bridge Splice</u>	<u>Half-Tap Splice</u>
AT&T (22-26 Awg) Technologies (19-24 Awg)	710-SC1-25 710-SCL-25	710-BC1-25 710-BC1-25	710-TC1-25 710-TCL-25
3M Company	4000-D 4000-DT 4000-D/TR 4001-D 4007-D 4075-s <sup>(3)</sup>	4005-DPM 4005-DPM/TR 4077-A <sup>(3)</sup> 4077-B <sup>(3)</sup> 4077-C <sup>(3)</sup> 4077-D <sup>(3)</sup>	4008-D 4075-s <sup>(3)</sup>

See page 3.1.2 for notes.

Manufacturer

Catalog Number

cm - Connectors and Cross-Connecting Blocks

Splicing Connectors for Copper Conductors<sup>(2)</sup>

	<u>Cross-Connecting Modules (25-Pair)</u>		
	<u>Feeder</u> (Green)	<u>Distribution</u> (Blue)	<u>Carrier</u> (Red or Yellow)
3M Company <sup>(3)</sup>	4010-E	4011-E	4012-E

Cross-Connecting Screw Blocks<sup>(4)</sup>  
25-Pair

3M Company	4320 SS-25
Reliance Comm/Tec (Reliable)	BT 1-25

Splicing Connectors for Optical Fibers

	<u>Passive</u>	<u>Tunable</u>	<u>Mass</u>
3M Company	2525 <sup>(7)</sup>	-	-
	2590 <sup>(8)</sup>	-	-

Notes: <sup>(1)</sup>Nonmoisture resistant connectors are to be used only on plastic-insulated nonfilled cables utilizing airtight splice enclosures and when moisture protection is provided by pressurization.

<sup>(2)</sup>Connectors in strip form may be used. Always use tool recommended by the manufacturer.

<sup>(3)</sup>All listed 3M modules shall use the appropriate grease boxes (4075-S, 4077-A, 4077-B, 4077-C, or 4077-D) in all applications except pressurized cables.

<sup>(4)</sup>Use block size recommended by the SAIC manufacturer. Color code by label only.

<sup>(5)</sup>For clearing and capping only.

<sup>(6)</sup>Not to be used on 19-gauge waterproof cable with solid polypropylene or high density polyethylene insulated conductors.

<sup>(7)</sup>For splicing 250 micron fiber to 250 micron fiber.

<sup>(8)</sup>For splicing 250 micron fiber to 900 micron fiber.

3.2  
1-93  
tm

Manufacturer

Catalog Number

tm - Cable Markers

Color Coded Tags

Brady  
Hickory Printing Group, Inc.  
Jamac Products  
U.G. Products

B-871<sup>(2)</sup>  
PC-2<sup>(3)</sup>  
ID<sup>(3)</sup>  
100<sup>(1)</sup>

Write On

Brady  
LEM  
Panduit Corp.  
Thomas & Betts Corp.

PWC-PK  
PPCL-BW  
PSCB  
WM-BW3  
WM-BW5

Notes: <sup>(1)</sup>The catalog number is suffixed with the letter R, B, or W to indicate Red, Blue or White bands.

<sup>(2)</sup>The catalog number is suffixed with the letter B, G or Y to indicate Blue, Green or Yellow color coded tags.

<sup>(3)</sup>The catalog number is suffixed with the letter B, G, W or Y to indicate Blue, Green, White or Yellow color coded tags.



Manufacturer

Catalog Number

gs - Bonding Connector Harnesses  
(Stranded Type Wire)

	<u>Bonding in Splice Cases or Splice Encapsulations</u>		<u>Bonding in Buried Plant Housings</u>		<u>Bonding in Ready-Access Enclosures</u>
	<u>10" Length</u>	<u>20" Length</u>	<u>15" Length</u>	<u>36" Length</u>	<u>22" Length</u>
Communications Technology	C-4080	C-4080	BH-1(1)	BH-2(1)	-
Engineered Products Co.	EH-11	EH-10	EH-18(1)	EH-19(1)	EH-20
Jamac	HS-13	HS-14	HH-4(1)	HH-5(1)	HT-22
LSW	LSW-1	LSW-2	LSW-3(1)	LSW-4(1)	-
Siecor (CAC)	GH-11	GH-10	GH-18(1)	GH-19(1)	GH-20

Flag Terminal(3)

LSW	-	-	LSW-8(1)	LSW-9(1)	-
-----	---	---	----------	----------	---

gs-b #6 AWG Braid

	<u>Insulated</u>	<u>Non-Insulated</u>
A.K. Stamping	-	A1163
Electric Motion Company	EM-2051	EM-2050
3M	25/4467(5)	25T(5)

Manufacturer

Catalog Number

gs - Bonding Connector Harnesses  
(Stranded Type Wire)

Buried Service Wire (Bare Metal Shields Only)

	<u>Station Protector</u>	<u>Buried Plant Housings</u>	
	<u>7" Length</u>	<u>15" Length</u>	<u>36" Length</u>
Engineered Products	EH-13 <sup>(4)</sup>	EH-16 <sup>(2)</sup>	EH-17 <sup>(2)</sup>
Jamac	HP-33 <sup>(4)</sup>	HH-6 <sup>(2)</sup>	HH-6L <sup>(2)</sup>
LSW	LSW-5 <sup>(4)</sup>	LSW-6 <sup>(2)</sup>	LSW-7 <sup>(2)</sup>
Preformed Line Products	8000739 <sup>(6)</sup>	-	-
Siecor (CAC)	GH-13 <sup>(4)</sup>	GH-16 <sup>(2)</sup>	GH-17 <sup>(2)</sup>
		<u>Flag Terminal</u> <sup>(3)</sup>	
LSW	-	LSW-10 <sup>(2)</sup>	LSW-11 <sup>(2)</sup>

- Notes: (1) These harnesses are equipped with a spring action terminal at one end to fit the Jamac SL-1 grounding lug connectors within buried plant housings.
- (2) These harnesses are equipped with a spring action terminal at one end and the AMP #329860 Termi-Foil<sup>R</sup> connector at the other end for attachment to the bare metal shield of service wire.
- (3) The spring action terminal for these harnesses is a right angle terminal.
- (4) Harnesses equipped with AMP #329860 Termi-Foil<sup>R</sup> connector at one end for attachment to the bare metal shield of service wire.
- (5) When ordering, state 3-inch eyelets.
- (6) Harnesses equipped with Preformed Line Products 8000733 connector at one end for attachment to the bare metal shield of service wire.

Manufacturer

Catalog Number

sv - Filled Plastic Sleeves

Jameson (W. G. Pearson)

Order by size and description

Note: Splicing connectors and plastic sleeves are to be used only on conductor sizes and types and splicing arrangements as recommended by the connector and sleeve manufacturers.

3.5  
1-93  
ap;rp

Manufacturer

Catalog Number

ap - Ant Repellent<sup>(1)</sup>

	<u>Ants</u>	<u>Fire Ants</u>
Fermenta Animal Health	Elastrel	Elastrel
Rainbow Technology	4485	4030

rp - Rodent Repellent

Phillips Petroleum

R55 Concentrate 25E

Notes: (1) Restricted to use within outside buried plant housings.

Manufacturer

Catalog Number

sm - Buried Plant Warning Signs, Stakes and Decal Markings

sm-a Decal Type Warning Signs and Markings<sup>(1)(2)</sup>

Non-Reflective

	<u>Warning Signs</u>	<u>Numerals &amp; Letters</u>	<u>Symbols</u>
W. H. Brady	X	X	
Color Arts, Inc.	X	X	
May Advertising Corp.	X	X	
3M Company	X	X	
Reliance Comm/Tec (Reliable)	X	X	
Vernon Company	X	-	

sm-b Decal Type Warning Signs and Markings<sup>(1)(2)</sup>

Reflective

	<u>Warning Signs</u>	<u>Numerals &amp; Letters</u>	<u>Symbols</u>
W. H. Brady	-	5905 Series	-
3M Company	-	No. 5000	No. 5002

See page 3.6.1 for notes.

Manufacturer

Catalog Number

sm - Buried Plant Warning Signs, Stakes and Decal Markings

sm-c Signs and Stakes

	<u>Cable Splice</u>	<u>Cable Route</u>	<u>Warning</u>
ACP International <sup>(3)</sup>	-	-	ACP-BM-53
W. H. Brady	B-11 <sup>(3)</sup>	B-13 <sup>(3)</sup>	B-12 <sup>(3)</sup>
	-	-	BL1
	-	-	BL2
Carsonite	-	-	Impactor
Lyle Signs Inc. <sup>(3)</sup>	UT-55	UT-54	UT-53
May Advertising Corp. <sup>(3)</sup>	BM55-MABCS 412	BM54-MACR 412	BM53-MABC 412
RAN Mfg. Inc. <sup>(3)</sup>	Spl R412	CR R412	Cu R412
Reliance Comm/Tec (Reliable)	RE-SPL-96"	RE-CR-96"	RE-412-ALUM-96"
Rustproof Signs, Inc. <sup>(3)</sup>	R-709 -	R-710 -	R-708 R-666
Safe-Hit Corp.	REA/PSA-1	REA/PSA-2	REA/PSA-3
SArgent-SOwell <sup>(3)</sup>	49PHV067	49PHV069	49PHV068

Mounting Stakes

W. H. Brady	96920
Carsonite	CUM-375
Rustproof Signs, Inc.	RP-208N

- Notes:**
- (1) All decals should be applied using manufacturers recommended materials and practices.
  - (2) Order by size and description.
  - (3) Stake not included.

LOADING COILS





<u>Item</u> <u>Designation</u>	<u>Page</u>
Coils, loading.....no.....	4.1



Manufacturer

no - Loading Coils  
(Complies with PE-26)

Type Designation

Catalog Number

Standard Loading Coils

	<u>G22</u>	<u>G31</u>	<u>G32</u>	<u>G34</u>	<u>G35</u>
Astrocom	50000F1	50000F1	1500	50000F1	Stack-Loc
Coil Sales	605	605	601	605	C152
Federal Telecom	824	824	152	824	35001

Mini-Loading Coils

	<u>GM22</u>	<u>GM31</u>	<u>GM32</u>	<u>GM34</u>	<u>GM35</u>
Coil Sales	904	904	901	904	B152
Federal Telecom	824M	824M	152M	824M	35001M

Type Designations

Standard Sizes

G22 and GM22 Direct Burial Assemblies	25 and greater
G31 and GM31 Strand Mount Assemblies	25 and greater
G32 and GM32 Potted Assemblies	3, 12, 18, 25
G34 and GM34 Pole and Manhole Assemblies	25 and greater
G35 and GM35 Single Coil Stackable Assemblies	1

When ordering loading coil assemblies the appropriate type designation must be followed by a dash and a number indicating the number of coils with which the assembly is to be equipped. A second dash must be followed by either 66 or 88 indicating the inductance of the coils. Examples are indicated below:

Example 1: G34-200-66 - Indicates pole mounted assembly equipped with 200 standard coils of 66 mH inductance.

Example 2: GM34-200-66- Indicates pole mounted assembly equipped with 200 mini-coils of 66 mH inductance.



**ELECTRICAL PROTECTIVE DEVICES**



<u>Item</u> <u>Designation</u>		<u>Page</u>
Arresters, gas tube.....	nh.....	5.4
" secondary power.....	gi.....	5.5
Blocks, terminal.....	sh.....	5.6
Protectors, mainframe.....	nm.....	5.2
" power service.....	gg.....	5.3
" station.....	ni.....	5.1





ni - Station Protectors<sup>(2)</sup>

Fuseless, Well Mount, Carbon

<u>Manufacturer</u>	<u>1-Pair</u>	<u>2-Pair</u>	<u>4-Pair</u>	<u>6-Pair</u>
Cook	500/MESA	502A1-2/MESA	502A1-4/MESA	502A1-6/MESA <sup>(1)</sup>
Reliance Comm/Tec (Reliable)	351S/1304S	393-2S/1304S	393-4S/1304S	393-6S/1304S <sup>(1)</sup>
	<u>25-Pair</u>			<u>50-Pair</u>
Reliance Comm/Tec (Reliable)	2BT25PMH/1304S 25P4X4MH/1304S <sup>(1)</sup>			2BT50PMH/1304S 50P4X4MH/1304S <sup>(1)</sup>

Notes:

<sup>(1)</sup>Restricted to inside mounting.

<sup>(2)</sup>Designations after the slash "/" mark indicates the arrester unit which REA has accepted for use in the listed protector. Unless otherwise noted, no other arrester unit is REA accepted for use in protectors listed here.

ni - Station Protectors<sup>(1)(2)</sup>

Fuseless, Module, Carbon

<u>Manufacturer</u>	<u>25-Pair</u>	<u>50-Pair</u>	<u>100-Pair</u>
Cook	C552/3A	C550/3A	C551/3A
3M <sup>(3)</sup>	4188-25 <sup>(4)</sup> /3A 4 <sup>(5)</sup> 88 <sup>(6)</sup> -25/3A 4888 <sup>(7)</sup> -25/3A	4188-50 <sup>(4)</sup> /3A 4 <sup>(5)</sup> 88 <sup>(6)</sup> -50/3A 4888 <sup>(7)</sup> -50/3A	4188-100 <sup>(4)</sup> /3A 4 <sup>(5)</sup> 88 <sup>(6)</sup> -100/3A 4888 <sup>(7)</sup> -100/3A
Reliance Comm/Tec (Reliable)	-	R134C/3AB	R134C/3AB

Fused, Well Mount, Carbon

1-Pair

Reliance Comm/Tec (Reliable)	375S/1304S
---------------------------------	------------

Notes: <sup>(1)</sup>Restricted to inside mounting.

<sup>(2)</sup>Designations after the slash "/" mark indicates the arrester unit which REA has accepted for use in the listed protector. Unless otherwise noted, no other arrester unit is REA accepted for use in protectors listed here.

<sup>(3)</sup>The arrester module accepted for these 3M protectors is the 3A MESA carbon arrester module manufactured by Northern Telecom.

<sup>(4)</sup>Must be supplied with 4188C-25, 50, or 100 protector covers, as appropriate to station protector size provided.

<sup>(5)</sup>Blank space replaced with 2, 4, 5 or 6.

<sup>(6)</sup>Blank space replaced with F or R.

<sup>(7)</sup>Blank space or blank space replaced with B. Accepted for outdoor mounting.



ni - Station Protectors(7)

Fuseless, Module, Gas Tube

<u>Manufacturer</u>	<u>1-Pair</u>	<u>2-Pair</u>	<u>4-Pair</u>	<u>6-Pair</u>
Joslyn	7040-01-EWR/125 EW-R(1)(4) 7040-01/356M(2)(4)	7040-02-EWR/125 EW-R(1)(4) 7040-02/356M(2)(4)	-	-
TII	3251M/355M(2)(5) 3261M/356M1(2)(4)	3252M/355M(2)(5) 3262M/356M1(2)(4)	5304M/356M1(2)(4) 5314M/355M(2)(5)	5306M/356M1(2)(4) 5316M/355M(2)(5)
	<u>25-Pair(6)</u>	<u>50-Pair(6)</u>	<u>100-Pair(6)</u>	
AT&T Network Systems	189-25/381ER(1)(4)	189-50/381ER(1)(4)	189-100/381ER(1)(4)	
Cook	C-552/7X(1)(4) C-552/9X(2)(4)	C-550/7X(1)(4) C-550/9X(2)(4)	C-551/7X(1)(4) C-551/9X(2)(4)	
3M(10)	4188-25(11)/6U2Vs(1)(4) 4188-25(11)/3GUVS(2)(3) 4 (8)88 (9)-25/6U2Vs(1)(4) 4 (8)88 (9)-25/3GUVS(2)(3) 4 (12)88 (13)-25/6U2Vs(1)(4) 4 (12)88 (13)-25/3GUVS(2)(3)	4188-50(11)/6U2Vs(1)(4) 4188-50(11)/3GUVS(2)(3) 4 (8)88 (9)-50/6U2Vs(1)(4) 4 (8)88 (9)-50/3GUVS(2)(3) 4 (12)88 (13)-50/6U2Vs(1)(4) 4 (12)88 (13)-50/3GUVS(2)(3)	4188-100(11)/6U2Vs(1)(4) 4188-100(11)/3GUVS(2)(3) 4 (8)88 (9)-100/6U2Vs(1)(4) 4 (8)88 (9)-100/3GUVS(2)(3) 4 (12)88 (13)-100/6U2Vs(1)(4) 4 (12)88 (13)-100/3GUVS(2)(3)	
Reliance Comm/Tec (Reliable)	-	R134C/6U2Vs(1)(4) R134C/3GUVS(2)(3)	R134C/6U2Vs(1)(4) R134C/3GUVS(2)(3)	
TII	515 25/355M(2)(5) 516 25/356M1(2)(4)	-	-	

Fused, Well Mount, Gas Tube

1-Pair

375SVSR2/1304VSR2(1)(4)

Reliance Comm/Tec  
(Reliable)

Notes:

- (1) 2-electrode.
- (2) 3-electrode.
- (3) Medium duty.
- (4) Heavy duty.
- (5) Maximum duty.
- (6) Restricted to inside mounting.
- (7) Designations after the slash "/" mark indicates the arrester unit which REA has accepted for use in the listed protector. Unless otherwise noted, no other arrester unit is REA accepted for use in protectors listed here.
- (8) Blank space replaced with 2, 4, 5 or 6.
- (9) Blank space replaced with F or R.
- (10) The arrester modules accepted for these 3M protectors are manufactured by Reliance Comm/Tec (Reliable).
- (11) Must be supplied with 4188C-25, 50, or 100 protector covers, as appropriate to station protector size provided.
- (12) Blank space replaced with 8 or 9. Accepted for outdoor mounting.
- (13) Blank space or blank space replaced with B.

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nm

nm - Mainframe Protectors<sup>(1)(7)</sup>

Manufacturer

	<u>Carbon</u>		
	<u>10-Pair</u>	<u>50-Pair</u>	<u>100-Pair</u>
Cook	C-311/3A	C-378/3A	C-388/3A
Porta Systems	-	-	508PF/35BCN
Reliance Comm/Tec (Reliable)	713/3AB	-	R399/3AB
	<u>Gas Tube</u>		
	<u>10-Pair</u>	<u>50-Pair</u>	<u>100-Pair</u>
AT&T Network Systems	-	-	310/3B1ER <sup>(2)(5)</sup>
Cook	C-311/7A <sup>(2)(5)</sup> C-311/9A <sup>(3)(5)</sup>	C-378/7A <sup>(2)(5)</sup> C-378/9A <sup>(3)(5)</sup>	C-388/7A <sup>(2)(5)</sup> C-388/9A <sup>(3)(5)</sup>
GTE Sylvania	-	-	DF-303/7GC <sup>(2)(5)</sup>
Porta Systems	-	-	508PF/65BCN <sup>(2)(5)</sup>
Reliance Comm/Tec (Reliable)	R713/6A20 <sup>(2)(5)</sup> R713/3G <sup>(3)(4)</sup>	-	R399/6A20 <sup>(2)(5)</sup> R399/3G <sup>(3)(4)</sup>

Notes: <sup>(1)</sup>Not to be used at subscribers premises.

<sup>(2)</sup>2-electrode.

<sup>(3)</sup>3-electrode.

<sup>(4)</sup>Medium duty.

<sup>(5)</sup>Heavy duty.

<sup>(6)</sup>Maximum duty.

<sup>(7)</sup>Designations after the slash "/" mark indicates the arrester unit which REA has accepted for use in the listed protector. Unless otherwise noted, no other arrester unit is REA accepted for use in protectors listed here.

Manufacturer

Catalog Number

gg - Power Service Protectors

Maximum Service Voltage: 125/250

EFI Corporation

DPI 153  
DPI 453 Turbo ST  
EFI 153  
EFI 453 Turbo ST

Joslyn

1270-02

Sylvania

CP 211

TII

410BM  
411BM  
412BM  
422BM

Transtector

ACP100BL  
CPS 150

Tripp Lite

ISOBLOK 2-0  
ISOBAR 2-6  
" 4-6  
" 8-15

nh - Gas Tube Arrester<sup>(1)</sup>

<u>Manufacturer</u>	<u>MDF Module</u>	<u>Station Module</u>	<u>Well Mount</u>
Cook	7A <sup>(2)(5)</sup> 9A <sup>(3)(5)</sup>	7X <sup>(2)(5)</sup> 9X <sup>(3)(5)</sup>	- -
GTE Sylvania	-	CP-514	-
Joslyn	-	2022-60-A <sup>(2)(5)</sup>	-
Porta Systems	-	65BCN <sup>(2)(5)</sup>	-
Reliance Comm/Tec (Reliable)	6A20 <sup>(2)(5)</sup> 3G <sup>(3)(4)</sup>	6U2VS <sup>(2)(5)</sup> 3GUVS <sup>(3)(4)</sup> G1200-0-350 <sup>(2)(5)</sup>	1304VSR2 <sup>(2)(5)</sup> -
TII	-	355M <sup>(3)(6)</sup> 356M1 <sup>(3)(5)</sup>	-

Notes:

- (1) Arresters listed under this category are not complete station protectors. They are intended for use as components, as accepted and listed, in the station protector "ni" and "nm" sections of the List of Materials. Arrester units here shall not be used in a station protector listed in the "ni" or "nm" section unless the same arrester unit is listed for use in the particular protector on the "ni" or "nm" pages.
- (2) 2-electrode.
- (3) 3-electrode.
- (4) Medium duty.
- (5) Heavy duty
- (6) Maximum duty.



Manufacturer

Catalog Number

gi - Secondary Power Arresters

Main Service Voltage: 125/250

	<u>Signal and Power</u>	<u>Power Only</u>
ACT Communications <sup>(5)</sup>	-	452-120-XOX 452-240-XOX 453-120-XOX 453-240-XOX 453-277-XOX 453-480-XOX 454-120-XOX 454-240-XOX 455-120-XOX 455-240-XOX 455-277-XOX 455-480-XOX 472-120-XOX 472-240-XOX 473-120-XOX 473-277-XOX
Advanced Protection Technologies	-	TE/100      TE/1000 TE/200      TE/2000 TE/300      TE/3000 TE/600      TE/6000
Approved Lightning Protection Co.	-	SA-20
EFI Corporation	-	MBP120EFI-Y <sup>(4)</sup>
General Electric		9L15DCB002
Joslyn		1250-02 1250-32 1250-33 1265-85 1455-85
Northern Technologies, Inc.		TCS- _ _ _ (1) - _ (2)

See page 5.5.1 for notes.

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gi

Manufacturer

Catalog Number

gi - Secondary Power Arresters

Other Service Voltages

Signal and Power

Power Only

Advanced Protection Technologies	-	TE/400	TE/4000
		TE/500	TE/5000
Joslyn	-	1250-32-E	
		1456-85	
Northern Technologies, Inc.	-	TCS- _ _ _ _	(1) _ (3)
Transtector	-	ACP3000	
		CPS Series	

Notes:

- (1) Four blank spaces replaced with 100, 250, 350, 500, 1000, or LAP.
- (2) Blank space replaced with B, C, or E.
- (3) Blank space replaced with F, G, or H.
- (4) Blank space replaced with 1, 2, or 3.
- (5) (X) denotes manufacturer's catalog number for optional lamps, alarming, and enclosures.

Manufacturer

Catalog Number

sh - Terminal Blocks

sh-a Unprotected Nonfilled Terminal Blocks

	<u>5-Pair (w/leads)</u>	<u>6-Pair (w/leads)</u>	<u>10-Pair (w/leads)</u>	<u>12-Pair (w/leads)</u>	<u>25-Pair (w/leads)</u>
Cook Electric	-	6B1	-	-	-
Reliance Comm/Tec (Reliable)	RPT5A4(1) RGT5A4(2)	145B	RPT10A4(1) RGT10A4(2)	-	RPT25A4(1) RGT25A4(2)
3M Company	5550	-	-	-	-

sh-b Protected Nonfilled Terminal Blocks

(Gas Tube Type)

	<u>1-Pair (w/single lead wire)</u>	<u>3-Pair (w/single lead wire)</u>
Reliance Comm/Tec (Reliable)	281B-GR3	381B-GR3

sh-b Protected Nonfilled Terminal Blocks

(Carbon Type)

	<u>1-Pair (w/single lead wire)</u>	<u>3-Pair (w/single lead wire)</u>
Reliance Comm/Tec (Reliable)	283C	383C

sh-c Unprotected Filled Terminal Blocks

	<u>2-Pair (w/leads)</u>	<u>5-Pair (w/leads)</u>	<u>6-Pair (w/leads)</u>	<u>10-Pair (w/leads)</u>	<u>12-Pair (w/leads)</u>	<u>25-Pair (w/leads)</u>
Raychem	-	PTB-5-AU-4-REA	-	PTB-10-AU-4-REA	PTB-12-AU-4-REA	PTB-25-AU-4-REA
	-	-	-	PTB-10-FS(3)-REA	PTB-12-FS(3)-REA	PTB-25-FS(3)-REA
Reliance Comm/Tec (Reliable)	-	RPIS5A(5) RGIS2SLS(4)	RPIS6A(5)(8) RGIS6A(6)	RPIS10A(5)(8) RGIS10A(6)(8)	RPIS12A(5)(8) RGIS12A(6)(8)	RPIS25A(5)(8) RGIS25A(6)(8) RTIS25A(7)(8)
	-	-	-	-	-	-

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Notes: (1)E/W bottom exit pigtail stub.

(2)E/W rear exit pigtail stub.

(3)Stub cables accepted in 12 feet and 25 feet lengths using REA accepted PE-39 or PE-89 cables.  
Order stub cable in accordance with manufacturer's instructions.

(4)Can only be ordered stubless from the manufacturer.

(5)E/W bottom exit pigtail stub available in 4, 12, or 25 foot lengths. Order pigtail stub in  
accordance with manufacturer's instructions.

(6)E/W rear exit pigtail stub available in 4, 12, or 25 foot lengths. Order pigtail stub in  
accordance with manufacturer's instructions.

(7)E/W top exit pigtail stub available in 4, 12, or 25 foot lengths. Order pigtail stub in  
accordance with manufacturer's instructions.

(8)Can be ordered with a filled cable stub using REA accepted PE-39 or PE-89 cables in 4, 12, or  
25 foot lengths. Order stub cable in accordance with manufacturer's instructions.

**TRANSMISSION AND  
CENTRAL OFFICE EQUIPMENT**



	<u>Item Designation</u>	<u>Page</u>
Alarm reporting systems.....	ar.....	6.7
Carrier equipment, digital		
carrier systems.....	ec.....	6.1
Concentrator, electronic subscriber		
line.....	ep.....	6.8
Equipment, electronic subscriber line		
concentrator.....	ep.....	6.8
"        ringing generator.....	gr.....	6.9
Extenders, central office loop.....	ex.....	6.6
"                "                "                "                with		
VF repeater.....	em.....	6.4
Generators, ringing.....	gr.....	6.9
Lightwave digital transmission		
systems.....	lt.....	6.10
Microwave equipment.....	gm.....	6.2
Radiotelephone equipment, mobile and		
fixed (BETRS).....	rm.....	6.3
Ringling generators.....	gr.....	6.9
Switching equipment, digital,		
stored program.....	pc.....	6.5





Manufacturer

Type Designation

ec - Carrier Equipment

Digital Carrier Systems

	D4 Type <u>Trunk Carrier</u> (PE-60a)	Subscriber <u>Carrier</u> <sup>(1)</sup> (PE-64a)	T1 Type <u>Span Line</u> <sup>(2)</sup> (PE-60b)	Automatic Protection <u>Switch</u> (PE-60c)
Alcatel	D448	LMS 3192	T1	B302
AT&T	D4	-	-	-
CIL/Wescom	360 D4 <sup>(3)</sup>	-	T1	-
CSE/Vidar	-	-	T-Carrier	-
Reliance Comm/ Tec (R-TEC)	-	DCM-24	-	-
Seiscor	-	S-24DU <sup>(3)</sup>	-	-
Siemens Stromberg- Carlson	9004 A/B	MLC-24 <sup>(5)</sup>	-	-
Sierra	-	DSS-6000	-	-

Notes:

- (1) D2/D3 encoding; compatible with compandored station carrier in small cables.
- (2) Span line consists of (a) span terminating equipment, (b) line access units, (c) line repeaters and repeater housings.
- (3) Optional Clear Channel Capability available.
- (4) Ternary encoded 48 channel span line for retrofit applications.
- (5) Product listed only for the Office Terminal/Remote Terminal (OT/RT) configuration. The Integrated Terminal (IT) for use on the GTD-5 EAX switch is not included for listing purposes.

gm - Digital Microwave Radio Systems

The following radio systems comply with PE-63 and Form 397d:

<u>Manufacturer</u>	<u>Designation</u>	<u>RF Band</u>	<u>Radio Capacity &amp; Interfaces</u> <sup>(1)</sup>	<u>Multiplex Designation</u>
Alcatel	MDR-5302	2 GHz	4 DS1	None
	MDR-5202	2 GHz	8 DS1	None
	MDR-5102	2 GHz	12 DS1	None
	MDR-4106C	6 GHz	1 DS3 (28 DS1)	DMX-3003
	MDR-4206	6 GHz	2 DS3 (56 DS1)	DMX-3003
	MDR-4306	6 GHz	3 DS3 (84 DS1)	DMX-3003
	MDR-4111	11 GHz	1 DS3 (28 DS1)	DMX-3003
	MDR-4211	11 GHz	2 DS3 (56 DS1)	DMX-3003
	MDR-4311	11 GHz	3 DS3 (84 DS1)	DMX-3003
AT&T	DR6-30-135 <sup>(2)</sup>	6 GHz	3 DS3 (84 DS1)	DDM-1000
	DR11-40-135 <sup>(2)</sup>	11 GHz	3 DS3 (84 DS1)	DDM-1000
Harris-Farion	Urbanet 2	2 GHz	1 DS1 (4 DS1)	DVT 4
	DVM2-8T	2 GHz	2 DS2 (8 DS1)	DVT 8
	DVM6-45	6 GHz	1 DS3 (28 DS1)	DVT-44
	DM6-90	6 GHz	2 DS3 (56 DS1)	DVT-44(2)
	Urbanet 10ec	10.5 GHz	1 DS1 (4 DS1)	DVT 4
	DM11-45	11 GHz	1 DS3 (28 DS1)	DVT 44
	DM11-90	11 GHz	2 DS3 (56 DS1)	DVT 44(2)
TeleSciences	DR2C-96	2 GHz	4 DS1	-
	DR2D-192	2 GHz	8 DS1	-

Notes: (1) The basic radio capacity and interface is shown first; with additional multiplex equipment, the maximum DS1 capacity is shown as (xx DS1). The manufacturer's digital multiplexer designation is also shown; this may be plug-in cards for the radio equipment, or separate multiplexer equipment.

(2) Includes own mounting framework; not compatible with standard 19" racks.

Manufacturer

Type Designation

rm - Mobile and Fixed Radiotelephone Equipment

BETRS Radio Systems

RF Band

Alcatel Network Systems	CXR-424	450 MHz
	Collins Exchange Radio <sup>(2)</sup>	
IMM	Ultraphone 100 <sup>(1)</sup>	450 MHz

**Notes:**

- (1) Four voice channels per 25 kHz radio channel using 16 kb/s digital coding in conjunction with demand assignment, time division multiple access.
- (2) Uses digital loop carrier technology with demand assignment and serves up to 24 subscribers. Only the base station and subscriber terminal are REA Accepted.

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em

Manufacturer

Catalog Number

em - Combination Voice Frequency Repeater/Loop Extender  
(Complies with PE-61)

Application

D-66

H-88

Alcatel Transcom	ITP5A/HD Issue 3 104, 108, 112 116, 120, 124 128, 132, 136	ITP5A/HD Issue 3 102, 106, 110 114, 118, 122 126, 130, 134
Cook Electric	6501L1T <sup>(1)</sup> 6501L13T <sup>(1)</sup>	6501L2T <sup>(1)</sup> 6501L14T <sup>(1)</sup>
Reliance Comm/Tec (R-TEC)	UM2500L6, L9, L12 L20, L23, L26 <sup>(2)</sup>	UM2500L7, L9, L13, L21, L23, L27 <sup>(2)</sup>

Notes:

(1) "Cut through" type (for use where remote testing facilities are installed add Suffix "T" to basic model number).

(2) AGC Options (L26 & L27) are not for use with Common Mode Operation.

pc - Stored Program Digital Switching Equipment

<u>Manufacturer</u>	<u>Base</u>	<u>Accepted System Release</u> <sup>(9)</sup>	<u>Acceptance Classification</u> <sup>(1)</sup>	<u>RST(s)</u>
AG Communications Systems	GTD-5EAX	1.6.3.1	A	RSU
American Digital Switching	ITS 4/5	7.1	A	RSS
Northern Telecom	DMS-10 <sup>(3)</sup>	405.10	C <sup>(2)</sup> (7)	RSLM (OPSM) <sup>(6)</sup> RLCM (OPM) RSLE
	DMS-100 <sup>(4)</sup>	BCS 33	C <sup>(2)</sup> (8)	RLCM (OPM) RSC
Redcom Lab., Inc.	MDX-384	12.1	C <sup>(2)</sup>	MDX-R
Siemens Stromberg- Carlson	DCO <sup>(5)</sup>	17.3	A	RLS-450 RLS-1080 RLS-4000

Notes:

- (1) Acceptance Classification: C-Conditionally Accepted, A-Accepted.
- (2) Conditionally Accepted: REA has determined that all major requirements of REA Form 522 have been met and that the items in noncompliance are not service affecting in most installations. Supplier will identify items of noncompliance on all contracts bid.
- (3) The DMS-10 listing includes the one and two bay version and its application as an HSO, SSO or LCC.
- (4) The DMS-100 listing includes its application as a DMS-200 tandem office.
- (5) DCO listing includes the DCO-SE one and two bay configurations and DCO RNS.
- (6) Only the 192 line configuration of the RSLM/OPSM is accepted.
- (7) DMS-10 system is conditionally accepted due to the unavailability of a 900 ohm line card for the Remote Switching Terminals (RST's). Special remedial measures will be available from the manufacturer until the line card is available.
- (8) DMS-100 conditionally accepted due to the unavailability of a 900 ohm line card for the Host office and the RST's. Special remedial measures will be available from the manufacturer until the line card is available.
- (9) The listed software/firmware system release is the most recent system release that was reviewed by REA and found to be fully compliant with all requirements of REA Bulletin 345-165, "REA General Specification for Digital, Stored Program Controlled Central Office Equipment, REA Form 522." Other system releases may also be acceptable. For information on specific releases, please contact the Chairman, Technical Standards Committee "A" (Telephone), Rural Electrification Administration, Washington, D.C. 20250-1500.

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1-93  
ex

<u>Manufacturer</u>	<u>Basic Unit</u>	<u>Loop Extender Cards</u> <sup>(1)</sup>
<u>ex - Central Office Loop Extension Equipment</u> (Complies with PE-61)		
Alcatel Transcom	-	BPM-5A
Cook Electric	-	6000L2 <sup>(2)</sup>
Reliance Comm/Tec (R-TEC)	-	UM2500L0 <sup>(2)</sup> UM2500L14 <sup>(3)</sup>
Superior TeleTec	- -	LLE-7123 L1 LLE-7123-L2 <sup>(2)</sup>
Telephone & Data Products	100020	100071
Wescom	-	7382

- Notes: (1) Before ordering insert cards refer to the manufacturer's catalog information for proper engineering application of each.
- (2) Stand alone loop extender with test through for remote testing.
- (3) Equipped with test through for remote testing when used with VF repeaters.

Manufacturer

Type Designation

ar - Alarm Reporting Systems

ADC Telecommunications	Model 2711
Ascom Warren	Impress Power Plant Monitor and Control System
COMDEV	Dispatcher Model D330E
Communication Manufacturing Co.	Series 5480
G.S. Badger/TTI	CL481
Hubbell-Pulsecom	Datalok 10
LeeMAH Telecommunications, Inc.	LM-201
Stellar Systems	MCM-1000 Alarm and Control System
Puleo Electronics, Inc.	PE 103-48-2B
Telephone & Data Products	Model 50



6.8  
1-93  
ep

Manufacturer

Type Designation

ep - Electronic Subscriber Line Concentrators

Alcatel Network Corp.	1218CS <sup>(1)</sup> 300S, 300M 1501 AN <sup>(3)</sup>
AT&T	SLC <sup>(R)</sup> Series 5
Comtech Communications Corp.	Midwec MOD-20
DSC Communications	Timespan <sup>(2)</sup> Litespan-2000
Northern Telecom	DMS-1 URBAN
Reliance Comm/Tec	DISC*S
Siemens Stromberg-Carlson	914A, 914E

Notes: <sup>(1)</sup>Includes 1218GR digital subscriber carrier which can be converted to 1218CS.

<sup>(2)</sup>This listing includes the following configurations: 32, 64, 128, 256, and 512.

<sup>(3)</sup>Includes TM-50/ADM-50 Lightwave Digital Transmission System which can be converted to a 1501 AN.



Manufacturer

Type Designation

gr - Ringing Generators  
(Complies with PE-40)

Multifrequency Generators

Direct Current Powered

Minimum rating, watts per frequency:	<u>15</u>	<u>25</u>	<u>50</u>	<u>100</u>
ITT Power Systems	-	PEC 3694	-	PEC 3843
Lorain Products	-	T-25P <sup>(1)</sup> T-25PR	T-50P <sup>(1)</sup> T-50PR	-
Warren G-V Communications	-	TRG-25 <sup>(1)</sup>	TRG-50 <sup>(1)</sup>	-

Single-Frequency Generators

Direct Current Powered

Minimum rating, watts per frequency:	<u>25</u>	<u>50</u>
ITT Power Systems	-	PEC 3877
Lorain Products	T-25P T-25PR	T-50P T-50PR

Note: <sup>(1)</sup>Basic series of equipment which may be applied in other configurations and combinations.

lt - Lightwave Digital Transmission Systems

<u>Manufacturer</u>	<u>Designation</u>	<u>Optical Bit Rate (Mb/s)</u>	<u>System Capacity &amp; Interfaces<sup>(1)</sup></u>	<u>Associated Multiplexer<sup>(2)</sup></u>
Alcatel	TM-50 <sup>(3)</sup>	51.84 (OC-1)	1DS3 (28 DS1)	TM-50 (1)
	ADM-50 <sup>(3)</sup>	51.84 (OC-1)	1DS3 (28 DS1)	ADM-50 (1)
	FTS-150 <sup>(3)</sup>	155.52 (OC-3)	3DS3 (84 DS1)	TM/ADM-50 (S)
	FTS-600 <sup>(3)</sup>	622.08 (OC-12)	12DS3 (336 DS1)	TM/ADM-50 (S)
	DML-3X50	50	1DS3 (28 DS1)	DML-3X50 (S)
		150	3DS3 (84 DS1)	DML-3X50 (S)
AT&T	DDM-1000	90	2DS3 (56 DS1)	DDM-1000 (1)
		180	4DS3 (112 DS1)	DDM-1000 (1)
	DDM-2000 OC-3 <sup>(3)</sup>	155.52 (OC-3)	3DS3 (84DS1)	DDM-2000 (1)
Telco Systems	828AF/AF-XT	45	1DS3 (28 DS1)	828A (1)
	M90	90	2DS3 (56 DS1)	828A (S)
	TLX-140	140	3DS3 (84 DS1)	828A (S)

Notes: <sup>(1)</sup>The basic lightwave system capacity and interface is shown first with the maximum DS1 capacity shown in parenthesis. The DS3 rate is approximately 45 Mb/s and has the capacity for 28 DS1's. The DS1 rate is approximately 1.5 Mb/s and has the capacity for 24 voice channels.

<sup>(2)</sup>Where separate stand-alone multiplex equipment may be used with the lightwave equipment, the manufacturer's associated digital multiplex designation is shown followed by (S). For integral multiplex- lightwave equipment, the associated multiplexer designation is followed by (1).

<sup>(3)</sup>ANSI T1 Phase 1 compatible Synchronous Optical Network (SONET) equipment.

**GENERAL HARDWARE**



	<u>Item</u> <u>Designation</u>	<u>Page</u>
Anchor rods.....	x.....	7.1
Anchors, guy - expanding and plate.....	z.....	7.2
"      " - drive-type.....	z.....	7.2
"      " - swamp and rock.....	z.....	7.2.1
Bolts, angle, thimble-eye.....	ba.....	7.13
machine.....	c.....	7.13
"      straight, thimble-eye.....	ao.....	7.13
Clamps, cable suspension.....	mz.....	7.15
"      drop wire.....	mk.....	7.3
"      ground rod and pipe (indoors).....	aj.....	7.4
"      ground rod and pipe (outdoors).....	aj.....	7.4.1
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Connectors, grounding.....	me.....	7.5
Guards, buried service.....	am.....	7.6
"      cable, plastic.....	wg.....	7.8
"      "      split metal.....	sl.....	7.7
"      riser.....	sg.....	7.8
Guy hooks.....	br.....	7.15
Guy lift plates.....	bk.....	7.15
Locknuts.....	ek.....	7.15
Numbers, pole.....	az.....	7.9
Nuts, regular, square.....	px.....	7.16
Rods, anchor.....	x.....	7.1
"      ground.....	ai.....	7.10
Screws, lag.....	j.....	7.14
Strand, suspension and guy.....	y.....	7.11
Straps, reinforcement, suspension clamp...	nb.....	7.16
Thimble-eye nuts.....	ab.....	7.14
Washers.....	d.....	7.14
Wires, cable lashing.....	nw.....	7.12
Miscellaneous items removed from the list.....		7.17



The manufacturers listed below have shown compliance with REA requirements for the following anchor rods. Some manufacturers cannot supply all sizes listed. Check with manufacturer or distributor for availability.

x - Anchor Rods

<u>Types</u>	<u>Diameters</u>	<u>Lengths</u>
Single Guy	1/2"	7 ft.
Single and Double Guys	5/8"	7 & 8 ft.
Single and Double Guys	3/4"	8, 9, & 10 ft.
Single and Double Guys	1"	8, 9, & 10 ft.

Manufacturers

Carolina Galvanizing Corporation  
A. B. Chance Company  
Joslyn Manufacturing and Supply Company  
Kortick Manufacturing Company  
McGraw-Edison  
Utilities Service Company

7.2  
1-93  
z

Manufacturer

Catalog Number

z - Anchors, Guy<sup>(1)</sup>

Expanding and Plate Anchors

Holding Power - Lbs.:		6000	10,000	16,000
Min. Required Area, Proj. Sq. In.:		90	120	200
Rod Diameter, Inches:		5/8	3/4	1
Rod Length, Feet:		<u>7</u>	<u>8</u>	<u>10</u>
A. B. Chance	8 Way	-	88135G	1082G
Grip-Tite	8 Way	A322086-G	A322812-G	A322102-G
Joslyn	8 Way	J8115G	J8135G	J8200-1G
	Plate	-	J7503G	-
McGraw-Edison	4 Way	DA1E5	DA1E7	-
	6 Way	-	-	DA6E3
	Plate	DA1P7	DA1P9	DA2P2
South Central	8 Way	84115AG	84135AG	-
	4 Way	-	-	1042001G

Drive-Type

Holding Power - Lbs.:	6,000	10,000	16,000
Rod Diameter - Inches:	<u>3/4</u>	<u>3/4</u>	<u>1</u>
Foresight Products	MR-3	MR-2	MR-1 MR-SR <sup>(2)</sup>

Notes: <sup>(1)</sup> Where galvanized anchors are listed, the same anchors ungalvanized (black asphalt coated) are also acceptable.

<sup>(2)</sup> Swamp anchor.



Manufacturer

Catalog Number<sup>(1)</sup>

z - Anchors, Guy

Swamp Anchors

	<u>10" dia.</u>	<u>12" dia.</u>	<u>15" dia.</u>
A. B. Chance	10150AS	132AS	152AS
Foresight Products	-	MR-SR <sup>(2)</sup>	-
Joslyn	J2871SG	J2872SG	J2873SG

Rock Anchors

	<u>Expanding Type</u>			<u>Split Wedge Type</u>
Anchor Size - Inches:	1-3/4	1-3/4	1-3/4	-
Rod Length - Inches:	15	30	53	18
Rod Diameter - Inches:	<u>3/4</u>	<u>3/4</u>	<u>3/4</u>	<u>1</u>
A. B. Chance	R315	R330	R353	-
Joslyn	J3436	J3437	J3438	-
Kortick	K5503	K5504	K5505	K2377
Utilities Service	CR315	CR330	CR353	-

Notes: <sup>(1)</sup> Where galvanized anchors are listed, the same anchors ungalvanized (black asphalt coated) are also acceptable.

<sup>(2)</sup> Drive type swamp anchor (see drive anchor category).

7.3  
1-93  
mk

Manufacturer

Catalog Number

mk - Drop Wire Clamps

Diamond Communications

23-44441  
23-88881\*

General Machine Products

7380-B

Reliable

PRS-6\*

\*Suitable for use in corrosive areas.

Manufacturer

Catalog Number

aj - Ground Rod and Pipe Clamps

Station Installations (Indoors Only)

This conductor:	.162" (#6 AWG) Copper	.102" (#10 AWG) Copper	.081" (#12 AWG) Copper
Connected to:	Pipe Ground (Copper or Steel) <u>5/8"-1-1/4" O.D.</u>	Pipe Ground (Copper or Steel) <u>5/8"-1-1/4" O.D.</u>	Pipe Ground (Copper or Steel) <u>5/8"-1-1/4" O.D.</u>
Electric Motion	EM5507 EM5517(3)	EM5507 EM5517(3)	EM5507 EM5517(3)
Reliable	13(1) -	13(1) 1(1)(2)	13(1) 1(1)(2)

Notes: (1)Smallest size pipe this clamp can be used on is 3/4".

(2)Can only be used on copper pipe.

(3)Can accommodate one #6 to #14 AWG and one #10 to #14 AWG copper conductor.

7.4.1  
1-93  
aj

Manufacturer

Catalog Number

aj - Ground Rod and Pipe Clamps

Station Installations (Outdoors)

.081" (#12 AWG), .102" (#10 AWG) and .162" (#6 AWG) Copper

	<u>Ground Rod (Galvanized Steel)</u>		<u>Ground Rod (Copper-Covered Steel)</u>	
Connected to:	<u>1/2"</u>	<u>5/8"</u>	<u>1/2"</u>	<u>5/8"</u>
Blackburn <sup>(1)</sup>	G4P	G5P	G4	G5
Connector Castings <sup>(1)</sup>	-	-	G-4	G-5
Electric Motion	EM5507 EM5517 <sup>(3)</sup>	EM5507 EM5517 <sup>(3)</sup>	EM5507 EM5517 <sup>(3)</sup>	EM5507 EM5517 <sup>(3)</sup>
Erico <sup>(1)(2)</sup> (Cadweld)	GR1-141G GR1-141A	GR1-161G GR1-161A	GR1-141G GR1-141A	GR1-161G GR1-161A
Eritech (Knight Metalcraft)	-	-	CP 12	CP 58
Joslyn	-	-	J8491	J8492 <sup>(4)</sup>

Notes:

(1) Accepted only for use with 0.102" (#10 AWG) and 0.162" (#6 AWG) wire.

(2) Includes disposable mold.

(3) Can accommodate one #6 to #14 AWG and one #10 to #14 AWG copper conductor.

(4) Accepted only for use with .162" (#6 AWG) wire.

Manufacturer

Catalog Number

me - Grounding Connectors

Connected to:	<u>.162" (#6 AWG) Copper</u>	<u>.102" (#10 AWG) Copper</u> <u>.162" (# 6 AWG) Copper</u>	<u>.102" (#10 AWG) Copper</u>
		<u>.257" (#4 AWG)</u> <u>ACSR</u>	<u>.102" (#10 AWG) Copper</u>
Anderson Electric	C-6	-	C-10
Blackburn	6H	-	-
Burndy	KS17	-	KS90
Dossert	DS2F	-	DS09F
Erico <sup>(1)</sup>	PGT-1G1G (Solid-to-Solid)	-	PGT-1B1A (Stranded-to-Solid)
	PGT-1H1H (Stranded-to-Stranded)	-	PGT-1A1A (Solid-to-Solid)
	PGT-1H1G (Solid-to-Stranded)		
Fargo	GC-5006	-	GC-5008
Joslyn	J3606	-	J3657F
Kearney	118102	-	118100
Penn-Union	S-6	SW-5	S-10
Reliable	6F	-	10F

<sup>(1)</sup>Additional Erico CADWELD connectors are available for other combinations of ground wire.

7.5.1  
1-93  
me

Manufacturer

Catalog Number

me - Grounding Connectors

(Compression Type)

.102" (#10 AWG) Copper  
to  
.109" (#12 BWG) (MPDW)

Burndy

YC8C8-ET

National Tel.

T2-109D

#6 Copper to  
#4 & #6 Alum.

#6 Copper to  
#2 & #4 Alum.

Blackburn

6CA

4CA

Manufacturer

Catalog Number

me - Grounding Connectors

<u>.102" (#10 AWG) Copper</u>		<u>#10 AWG Copper</u>
Connected to: <u>.109" (#12 BWG) Steel (MPDW)</u>		<u>.134" Steel (MPDW)</u>
Blackburn	9TW	-
Burndy	KSL-15	-
Dossert	DSN1F	-
Penn-Union	SW-1	SW-2
Reliable	10FGB	8FGB

.102" (#10 AWG) Copper

Connected to galvanized steel strand:		<u>6M</u>	<u>10M</u>	<u>16M</u>
Aberdeen	AB 438		AB 438	AB 438
Blackburn	1HPS		10HPS	20HPS
Dossert	DSNS6F		DSNS10F	DSNS13F
Fargo	GC8010P		GC8020P	GC8020P
Joslyn	J-3030		J-3030	J-3030
Penn-Union	SW-6		SW-7	SW-8
Reliable	438ALC		438ALC	438ALC

.102" (#10 AWG) Copper

Connected to:		<u>Aluminum-Clad Steel Strand</u>		
		<u>6M</u>	<u>10M</u>	<u>16M</u>
Fargo	GA-620C		GA-620C	GA-620C
Penn-Union	PCA-010-H		PCA-010-H	PCA-010-H
Reliable	438ALC		438ALC	438ALC

For Buried Plant Housings (PE-91)

	<u>#6 AWG</u>	<u>#10 AWG</u>
Fargo	GC-164SHP <sup>(1)</sup> GC-5006SHP	GC-164SHP <sup>(1)</sup> GC-5008SHP

<sup>(1)</sup>Connector will accept braid.

7.6  
1-93  
am

Manufacturer

Catalog Number

am - Buried Service House Riser Guards

Type:	<u>Conduit</u>	<u>Closed "U"</u>	<u>Conduit</u>	<u>Conduit</u>	<u>Conduit</u>
Standard Length and Size:	<u>5' x 5/8"</u>	<u>5' x 5/8"</u>	<u>5' x 3/8"</u>	<u>20' x 1" I.D.</u>	<u>5' x 1/2" I.D.</u>
Coil Sales	12-119R	-	-	-	-
Phonotronics Inc.	R-070	-	-	-	R-061
Virginia Plastics	-	VP-B58*	VP-38-5*	VP-1-EC	-

\*Staples will be required for mounting conduit. Double headed nails will be required for mounting Closed "U" type moulding. The mounting hardware shall be ordered separately from this manufacturer.



Manufacturer

Catalog Number

sl - Split Metal Cable Guards

10-Foot Straight Section

1" I.D.

3" I.D.

Midland-Ross

SD15-10<sup>(1)</sup>

SD35-10<sup>(1)</sup>

5-Foot Straight Section

5-Foot Curved Section

1" I.D.

3" I.D.

1" I.D.

3" I.D.

Butler

077005

077743

077004

077747

Midland-Ross

SD15-5<sup>(1)</sup>

SD35-5<sup>(1)</sup>

-

-

2-1/2-Foot Straight Section

2-1/2-Foot Curved Section

1" I.D.

3" I.D.

1" I.D.

3" I.D.

Butler

077009

077745

077011

077749

Midland-Ross

SD15-2<sup>(1)</sup>

SD35-2<sup>(1)</sup>

-

-

<sup>(1)</sup>Elbows of varying sizes and angles may be ordered separately.

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1-93  
sg;wg

Manufacturer

Catalog Number

sg - Riser Guards (Pole)<sup>(1)</sup>

Inside diameter, inches:	<u>1</u>	<u>2</u>	<u>3</u>
Carlson Products	-	59011	59013
A. B. Chance	6531-1/2	6533	6535
Custom Plastics <sup>(2)</sup>	CPU1	CPU2	CPU3
Electrical Materials Co.	51-2	52-2	53-2
Fargo	UP-843G*	UP-844G*	UP-845G*
Inwesco	54B01	54B03	54B04
Joslyn	J984	J987	J989
McGraw-Edison	DU7P4	DU7P6	DU7P8
Midland-Ross Corp.	SD15-10 <sup>(1)(2)</sup>	SD25-10 <sup>(1)(2)</sup>	SD35-10 <sup>(1)(2)</sup>
Nordic Fiberglass	U-101 <sup>(2)</sup>	-	-
Reliance Comm/Tec (Reliable)	UP125-8G*	UP225-8G*	UP325-8G*

\*Numbers shown identify painted guards. Use of riser guard straps with these guards not needed.

<sup>(1)</sup>Order by inside diameter and length.

<sup>(2)</sup>Mounting staples must be purchased separately.

wg - Plastic Cable Guards

Longitudinally Split

Sizes, inches:	<u>1 x 8</u>	<u>1-1/2 x 8</u>	<u>2 x 8</u>
General Machine Products	7422-1	7422-1-1/2	7422-2

Spirally Cut

AMP  
General Machine Products  
Preformed Line

\*Spirap (Specify diameter and length)  
Type F       "       "       "  
Type PTG     "       "       "

\*Specify black outdoor polyethylene.

Manufacturer

Catalog Number

az - Numbers, Pole

Metal

	<u>1"</u>	<u>1-1/2"</u>	<u>3"</u>	<u>6"</u>
Almetek <sup>(1)</sup>	X	-	X	X
Premax <sup>(1)</sup>	-	X	-	-

Plastic

3M Company

No. 5012 (Use 3M decals from 3M-b)

Note: <sup>(1)</sup>Order by size and description.

7.10

1-93

ai

ManufacturerCatalog Numberai - Ground Rods  
(without pigtails)

	<u>5/8" x 8'</u>	<u>1/2" x 5'</u>	<u>5/8" x 10' Sectional</u>	<u>Sectional Coupling</u>
Blackburn	GR6258* 625813MX**	- -	- 6260S13MX**	- 60C
A. B. Chance	8578*	8565*	8512*	8611*
Eritech (Carolina Galvanizing/ Knight Metalcraft)	815880* 615883**	- 611353**	835800* 635803**	GSC-58* CR58**
Galvan	GR6258*	GR5005*	-	-
Joslyn	J5328*	J5315*	J23282.10* J9160-13**	J23282-A* J9182**
Kortick	K4658-F*	-	-	-
McGraw-Edison	DN5S8*	-	DN13S110*	DN1K2*
Utilities Service	5307*	-	-	-
Wilcor	WA8580G*	-	-	-

\*Galvanized Steel

\*\*Copper-Covered Steel

Manufacturer

Catalog Number

y - Suspension and Guy Strand

These manufacturers' strands shown by X's comply with  
REA 7 CFR Part 1755.370

Utilities grade, steel, seven wire  
(For use as suspension or for guys)

	<u>5/16"(6M)</u>	<u>3/8"(10M)</u>	<u>7/16"(16M)</u>	<u>Class</u>
Bekaert Corporation	X	X	X	A
Cal-Wire Stranding	X	X	X	A,B,C
CF&I Steel Corporation	X	X	X	A
Davis Walker Corporation	X	X	X	A
Florida Wire and Cable	X	X	X	A,B,C
Indiana Steel & Wire	X	X	X	A,B,C
National Strand Products	X	X	X	A,B,C
Seal Wire	X	X	X	A

Extra High Strength Grade, steel, seven wire  
(For use as suspension or for guys)

	<u>1/4"(6M)</u>	<u>5/16"(10M)</u>	<u>7/16"(16M)</u>	<u>Class</u>
Bekaert Corporation	X	X	-	A
Cal-Wire Stranding	X	X	X	A,B,C
CF&I Steel Corporation	X	X	X	A
Davis Walker Corporation	X	X	-	A
Florida Wire and Cable	X	X	X	A,B,C
Indiana Steel & Wire	X	X	X	A,B,C
National Strand Products	X	X	X	A,B,C
Paulsen Wire Rope Corp.	X	-	-	A
Seal Wire	X	-	-	A
Union Wire Rope	X	X	X	A

7.12  
1-93  
nw

Manufacturer

Catalog Number

nw - Cable Lashing Wires

	Aluminum-Clad <u>Steel</u>			Type 430 <u>Stainless Steel</u>		<u>Aluminum*</u>
Diameter, Inches:	.064	.045	.061	.045	.061	.080
Coil Length, Feet:	<u>600</u>	<u>1200</u>	<u>650</u>	<u>1200</u>	<u>650</u>	<u>375</u>
Aberdeen	-	-	-	45AC	61AC	-
Cable Spinning Equipment Company	-	-	-	13A	11A	16A
General Machine Products	-	-	-	7153A	-	-
Loos & Company	-	-	-	045SA430LP	061SA430LP	-
Maryland Specialty Wire, Inc.	-	-	-	958-45M	958-61M	-
National Standard	-	-	-	03811	18815	-
Senior Industries	-	-	-	SI-9603	SI-9606	-

\*This type of wire only, is to be used with aluminum-clad steel strand in seacoast areas.

Manufacturer

Catalog Number

c - Bolts, machine

	<u>5/8"</u>	<u>3/4"</u>
Chance	C88XX <sup>(1)</sup>	C89XX <sup>(2)</sup>
Joslyn	J88XX <sup>(6)</sup>	J89XX <sup>(7)</sup>

ao - Bolts, straight, thimble-eye

	<u>5/8"</u>	<u>3/4"</u>
Chance	C55XX <sup>(3)</sup>	C56XX <sup>(4)</sup>
Joslyn	J80XX <sup>(8)</sup>	J80XX <sup>(9)</sup>

ba - Bolts, angle, thimble-eye

	<u>5/8"</u>	<u>3/4"</u>
Chance	C50XX <sup>(3)</sup>	C51XX <sup>(5)</sup>
Joslyn	J81XX <sup>(8)</sup>	J81XX <sup>(9)</sup>

See page 7.13.1 for notes.

Notes:

- (1) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 5", 6", 7", 8", 9", 10", 12", 14", 16", 18", 20", 22", and 24".
- (2) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 8", 10", 12", 14", 16", 18", 20", 22", 24", and 26".
- (3) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 10", 12", 14", and 16".
- (4) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 12" and 14".
- (5) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 10", 12", and 14".
- (6) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 5", 6", 7", 8", 9", 10", 11", 12", 13", 14", 15", 16", 18", 20", 22", and 24".
- (7) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 5", 6", 7", 8", 9", 10", 12", 14", 16", 18", 20", 22", 24", and 26".
- (8) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 6", 8", 10", and 12".
- (9) Order bolts by changing X's in catalog number to length of bolt in inches; accepted for lengths 8", 10", and 12".



7.14  
1-93  
d;j;u;ab

Manufacturer

Catalog Number

d - Washers

Type:	<u>Curved</u>			<u>Flat</u>		<u>Square</u>
Size, in.:	2-1/2x2-1/2x3/16	3x3x1/4	3x3x1/4	2-1/4x2-1/4x3/16	2-1/4x2-1/4x3/16	2-1/4x2-1/4
Hole sizes, in.:	<u>11/16</u>	<u>11/16</u>	<u>13/16</u>	<u>13/16</u>	<u>11/16</u>	<u>11/16</u>
Chance	-	6823 1/2	6822 1/2	-	-	6813
Stanley G. Flagg	-	-	P143A	-	-	-
Joslyn	J6822	J113	J6823	J1076	J1075	-

j - Screws, Lag

	<u>1/2" x 4"</u>	<u>5/8" x 5"</u>
Joslyn	J-8754P	J-8765

u - Guy Clamps

Strand size, inches:	<u>5/16</u>	<u>7/16</u>
Joslyn	J930	J931

ab - Thimble-Eye Nuts

Size, inches:	<u>5/8</u>	<u>3/4</u>	<u>3/8</u>
Chance	6510	-	-
Stanley G. Flagg	P128A	-	P129A
Joslyn	J6510	J6511	-

7.15  
1-93  
bk;br

Manufacturer

Catalog Number

bk - Guy Lift Plates

	<u>For 5/8" Bolts</u>	<u>For 3/4" Bolts</u>
Chance	-	7897
Joslyn	J7896	J7894

br - Guy Hooks

Bolt size (inches):	<u>5/8</u>	<u>3/4</u>
Stanley G. Flagg	P135AX	P134AX
Joslyn	J6555	J6556

ek - Locknuts

Size:	<u>5/8"</u>	<u>3/4"</u>
Joslyn	J8583	J8584

mz - Cable Suspension Clamps

Type:	<u>Straight</u>	<u>Angle</u>
Joslyn	J1096	J7902-B

7.16  
1-93  
nb;px

Manufacturer

Catalog Number

nb - Suspension Clamp Reinforcement Straps

Size:	<u>1-3/4"</u>	<u>2"</u>
Joslyn	J7905	J7908

px - Regular Square Nuts

Size:	<u>5/8"</u>	<u>3/4"</u>
Joslyn	J8563	J8564

The following items have been removed from the List of Materials because of their limited use and not because of their inability to meet applicable requirements. Their removal from the list does not relieve borrowers of their responsibility to use materials that meet REA requirements, ASTM or other national specifications.

- i - Bolts, carriage
- aa - Oval eye nuts
- al - Ground wire staples and nails
- at - Guy guards
- bl - Steel support brackets
- bm - Guy thimble
- cb - Conductor bundle bags
- df - False deadends
- dm - Permanent cable identification markers
- dz - Guy wire clips
- mf - Drive hooks
- mi - Drop wire support
- mj - Drop wire clip
- mm - Drive rings
- mo - Angle screw
- mx - Steel pole steps
- my - Drop wire hooks
- nc - Cable extension arms
- nd - Metal pole keys
- ne - Bridle rings
- ns - Span clamps
- pg - Porcelain insulated screweyes
- ph - Screw anchors
- pk - Moisture blocks
- pt - Vinyl tape
- pw - Detachable pole steps
- py - Lashing wire terminal clamps
- st - spacer tape
- tc - Cable ties
- za - Filler tape
- ze - Sealing compound



